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ABSTRACT

The manual provides almost all necessary materials for the successful implementation of a Highway Safety Workshop, designed around a developmental sequence which is basic to the success of the workshop. The major activities of the workshop center around three exercises-the first for small group discussion consisting of questions relating to aspects of traffic safety, the second suggesting countermeasures, and the third concerning a systems approach to highway safety. A film and two presentations separate the exercises. For each session resource materials (abstracts of related literature), notes for trainers, and a bibliography are provided. (SA)

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# Highway Safety Workshop for
# Traffic Court Judges

## Trainer's Manual

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

November 1973

U.S. DEPARTMENT OF HEALTH
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DOT/HS – 820 300

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# Highway Safety Workshop
# Trainer's Manual
## Contents

Page

1. Purpose and Use of the Manual 1
    Summary of Workshop Activities 3
    The Role of the Trainer 6
    Sample Workshop Schedule 8
    Sample Workshop Evaluation Form 10

2. Introductory Speech 15

3. Exercise I - Definition of the Problem

    Purpose and Description 19
    Notes to Trainers 22
    Instructions to Participants 25
    Group 1 - Question 28
    Group 1 - Research Abstracts 29
    Group 2 - Question 37
    Group 2 - Research Abstracts 38
    Group 3 - Question 43
    Group 3 - Research Abstracts 44
    Group 4 - Question 57
    Group 4 - Research Abstracts 58

4. Presentation - "More than a Minute"

    Purpose and Description 65
    Notes to Trainers 66
    Presentation 68

5. Film - Ladies and Gentlemen of the Jury

    Purpose and Description 79
    Notes to Trainers 80
    Instructions to Participants 81

6. Exercise II - Countermeasures

    Purpose and Description 83
    Notes to Trainers 84
    Instructions to Participants 85
    List of Countermeasures 87

Page

7. Presentation - "Proven Effective"
   - Purpose and Description 89
   - Notes to Trainers 90
   - Presentation 91

8. Exercise III - Highway Safety - A Systems Approach
   - Purpose and Description 103
   - Notes to Trainers 104
   - Instructions to Participants 106
   - A Case History 107
   - Research Items 109
   - Research Abstracts 116

9. Concluding Speech 141

10. Bibliography 145

# Purpose and Use of the Manual

This manual has been prepared to provide trainers with all necessary materials for the successful implementation of the Highway Safety Workshop. The one exception is the film, Ladies and Gentlemen of the Jury, which can be obtained from the National Highway Traffic Safety Administration of the Department of Transportation.

While the manual offers both materials and guidelines, it should be emphasized that the workshop itself is a dynamic learning and working experience that must respond to the particular needs of the participants and their regional or local concerns. Though many workshops may make use of this manual, no two workshops will be the same. Chairman and trainers are encouraged to modify speeches to conform to individual speaking styles and to incorporate state or regional research and plans into the appropriate presentations.

The workshop has been designed around a developmental sequence that provides for the involvement of participants in workshop goals and structures the presentation of information to meet emerging needs. It is important that this general sequence be maintained. A radical change in sequence will decrease the effectiveness of each workshop activity and lessen the impact of the workshop as a whole.

The manual is divided into sections that correspond to the major activities of the workshop. Sections other than the introductory and concluding speeches contain a brief summary of the purpose and description of the activity. Each section also contains "Notes to Trainers" which offer general suggestions on conducting the exercise.

Each page intended for participants use has been given a special heading - the number of the exercise appears in the upper right corner of the page, the group to which it is to be distributed appears in the upper left corner of the page.

Trainers should remove these pages from this manual and duplicate in advance the appropriate number of copies. If there are to be 24 participants, 24 copies should be made of all pages with the heading "All Participants." Using the same example, when the 24 participants meet in four small groups of six participants each, six copies should be made of all "Group 1" pages, six of all "Group 2" pages, etc.

All speeches for the workshop Chairman or trainers are printed in large type to facilitate reading from a speaker's stand or podium.

Administrators and trainers should use this Trainer's Manual in planning and implementing the workshop. Its accompanying volume, the Participant's Reference Manual, contains copies of major workshop presentations, research abstracts used in all activities and a bibliography of additional related materials. Since it is important to control the flow of information to participants according to the development of each activity, the Participant's Reference Manual should not be distributed until the conclusion of the workshop.

# Summary of Workshop Activities

Introduction. Welcoming speech by workshop chairman stating goals of workshop and presenting an overview of workshop activities.

Exercise 1 - Definition of the Problem. Participants meet in small groups with trainers to discuss specific aspects of the highway safety problem. Each group is provided with a statement of the common assumptions that partially define the problem and with summaries of research studies related to that definition. Participants redefine the problem in light of research and their own experience and make recommendations for the way in which the courts might deal with the problem. Each small group then reports the results of their discussion to all other participants in the general meeting. Much of the content of this exercise deals with the distinction between the routine or average violator and the problem driver and the implications this distinction has for the procedures and goals of our traffic courts.

Presentation - "More than a Minute". Speech by conference chairman or guest speaker. Speaker refers to previous small group reports and then reviews research and explores the advantages of a reduction in the court case load that would allow the court to concentrate its resources upon the problem driver. Some possible models for the achievement of a reduced case load are discussed. Total group discussion follows.

Film - Ladies and Gentlemen of the Jury. This film deals with one of the major categories of problem drivers - the excessive drinker. Participants discuss it and its public education intent and how it might be used in their own communities. Participants share views of this problem and possible approaches to its solution.

Exercise II - Countermeasures. Participants are given a list of possible countermeasures and are asked to discuss which countermeasures, or combination of countermeasures, they feel would be most effective in dealing with the driver in the film, Ladies and Gentlemen of the Jury". Small groups then report the results of their discussions, including minority opinions within their group, to all participants in a general meeting. This exercise illustrates the lack of agreement on the most effective countermeasures and the lack of concrete evidence supporting the use of any one countermeasure.

Presentation - "Proven Effective". Speech by conference chairman or guest speaker. The speech begins with a reference to the preceding countermeasure discussion and the argument that the lack of agreement indicates a need for reliable evaluations of countermeasures and their effect on highway safety. Several major countermeasure evaluations are discussed. Participants are urged to consider the need for evaluation in regard to their own jurisdictions and their role as judges. Possible sources of assistance in evaluation efforts are suggested. Discussion follows.

Exercise III - Highway Safety - A Systems Approach. Participants meet in small groups to discuss a case history of an accident with multiple causes - driver behavior, road design, vehicle condition, etc. Participants also receive very brief descriptions of research results dealing with many aspects of the highway safety system. Each group identifies the elements of the system that contributed to the accident and considers ways in which this element might have been changed to prevent the accident.

Small groups report the results of their discussion to all participants in a general meeting. The chairman of the workshop notes that each of the elements described is a part of the highway safety system and that the judge is potentially a coordinating force, influencing cooperation and improvement throughout the system. Ways in which the judge might work to bring about this cooperation in his own community are discussed.

Conclusion. Final speech by workshop chairman, summarizing major goals, work accomplished and recommendations made.

# The Role of the Trainer

The trainer serves two functions in the course of this workshop. He is both a facilitator of discussion and an expert resource. As a facilitator, he does not dominate, but guides small group discussion, encouraging participants to express their opinions and work toward mutual understanding and shared learning. As an expert resource, the trainer makes available to participants research relating to their group tasks and assists them in assessing this data in light of their own experience and expertise.

While each section of this manual that deals with a major workshop activity includes notes to trainers that will help him implement the activity, the following are general suggestions which the trainer may find useful throughout the workshop. All of them pertain to the small group discussions where his role as facilitator/resource will have an important effect upon the success of the exercise.

> In small group meetings, participants should be seated in a circle. The trainer should be a part of this circle, not seated apart from the other members of the group. Such a seating arrangement contributes to open, informal discussion.
>
> The trainer should attempt to elicit opinions from all members of his group. At all times he should model appropriate behavior by listening carefully to what is being said and asking members of the group to comment on ideas and opinions expressed.
>
> The trainer should summarize what has been said in the group at appropriate intervals during the discussion. This will assist the group in reaching consensus and in moving from one discussion topic to another.

All small group meetings are task-oriented in that the groups are asked to reach conclusions and report the results of their discussions. The trainer should remind the group of their task whenever the discussion begins to range into peripheral or unrelated issues.

The trainer makes a critical contribution to the effectiveness of the workshop. By a careful review of this manual and thoughtful preparation for each exercise, the trainer can do much to insure maximum benefit for all participants from the workshop experience.

## Sample Workshop Schedule

The sample workshop schedule on the following page indicates the approximate time needed for the implementation of each workshop activity. In this example, the workshop begins at 2:00 p.m. on a Friday afternoon. This time was chosen to meet the needs of many judges who cannot leave their courts until the weekend. While the sequence of activities should remain the same, the workshop could be scheduled to begin in the morning of the first day, continuing through noon of the second day.

This sample schedule allows a generous amount of time for small group discussions and general discussions following formal presentations. With a small number of participants and shortened discussion time, it would be possible to complete the workshop in one full day and partial evening.

## HIGHWAY SAFETY WORKSHOP

### SAMPLE SCHEDULE

Friday

| | |
|---|---|
| 2:00 p.m. | Introduction |
| 2:30 p.m. | Exercise I - Definition of the Problem |
| 2:45 p.m. | Small Group Meetings |
| 3:30 p.m. | Coffee |
| 3:45 p.m. | General Meeting - Definition Discussion |
| 4:30 p.m. | Presentation - "More than a Minute" |
| 5:30 p.m. | Cocktails |
| 6:15 p.m. | Dinner |
| 7:30 p.m. | Film: *Ladies and Gentlemen of the Jury* |
| 8:00 p.m. | Discussion |

Saturday

| | |
|---|---|
| 9:00 a.m. | Exercise II - Countermeasures |
| 9:15 a.m. | Small Group Meetings |
| 10:00 a.m. | Coffee |
| 10:15 a.m. | General Meeting - Countermeasure Discussion |
| 11:00 a.m. | Presentation "Proven Effective" |
| 12:00 p.m. | Lunch |
| 1:30 p.m. | Exercise III - Highway Safety - A Systems Approach |
| 2:00 p.m. | Small Group Meetings |
| 2:45 p.m. | Coffee |
| 3:00 p.m. | General Meeting - Systems Discussion |
| 4:00 p.m. | Conclusion and Evaluation |

# Sample Workshop Evaluation Form

Those who sponsor and conduct the Highway Safety Workshop may find an evaluation of the workshop useful in planning future activities of this kind. The sample evaluation form on the following pages will give trainers and participants an opportunity to generally rate all workshop activities and to make suggestions for their improvement.

Trainers and participants should be asked to complete the evaluation form after all workshop activities have been concluded.

## Highway Safety Workshop

## Sample Evaluation Form

Your evaluation and comments about this workshop will assist us in planning future activities of this kind. Please be candid and make concrete suggestions about exercises and materials. Please check the appropriate rating and add comments if you wish.

Rating system - circle one: E - Excellent, AA - Above Average, A - Adequate
BA - Below Average, U - Unacceptable

[illegible] Workshop Events:

A. Definition of the Problem

1) Small Group Discussion: E AA A BA U

Comments:

2) General Meeting - Small Group Reports: E AA A BA U

Comments:

B. Presentation - "More than a Minute": E AA A BA U

Comments:

C. Film

1) Film - "Ladies and Gentlemen of the Jury": E AA A BA U

Comments:

2) Discussion following film: E AA A BA U

Comments:

D. Countermeasures

1) Small Group Discussions: E AA A BA U

Comments:

2) General Meeting - Small Group Reports: E AA A BA U

Comments:

E. Presentation - "Proven Effective": E AA A BA U

Comments:

F. Highway Safety - A Systems Approach

1) Small Group Discussion: E AA A BA U

Comments:

2) General Meeting: E AA A BA U

Comments:

2. Please rate this entire Workshop itself: E AA A BA U

Comments:

3. Please rate this Workshop comparatively against other workshops or conferences you have participated in: E AA A BA U

Comments:

# INTRODUCTORY SPEECH

GOOD AFTERNOON. IT IS MY PLEASURE TO WELCOME YOU TO THIS HIGHWAY SAFETY WORKSHOP. MY NAME IS ____________________ AND I WILL BE SERVING AS YOUR CHAIRMAN. AS YOU WILL SOON LEARN, I HAVE A SIMPLE JOB - A FEW INTRODUCTORY REMARKS. YOU WILL HAVE A MUCH MORE CHALLENGING JOB - WORKING TOGETHER TO EXAMINE AND UNDERSTAND A COMPLEX PROBLEM, TO REVIEW HOW IT HAS BEEN APPROACHED IN THE PAST, AND TO INDICATE SOME DIRECTIONS FOR THE FUTURE.

THE BROAD ISSUE WE ARE GOING TO CONSIDER HERE IS THE QUESTION, "HOW CAN WE INCREASE THE EFFECTIVENESS OF TRAFFIC COURTS IN MANAGING THE HIGHWAY SAFETY PROBLEM?" WE DO NOT INTEND TO DISCUSS THIS PROBLEM SOLELY IN TERMS OF ITS SYMPTOMS - THE GROWING NUMBER OF VIOLATIONS AND ACCIDENTS AND THE CORRESPONDING LOSS IN LIVES AND PROPERTY. WE HOPE TO GO BEYOND SUCH A STATEMENT OF SYMPTOMS TO A REDEFINITION OF THE PROBLEM ITSELF.

IN ORDER TO ACHIEVE OUR FIRST OBJECTIVE - THE REDEFINITION OF THE HIGHWAY SAFETY PROBLEM - WE WILL ASK YOU TO APPLY YOUR EXPERIENCE AND EXPERTISE AS JUDGES TO SOME OF THE LATEST FINDINGS IN HIGHWAY SAFETY RESEARCH. SPECIFICALLY, OUR WORK WILL DEAL WITH THE IDENTIFICATION OF THE KINDS OF DRIVERS INVOLVED IN MOST ACCIDENTS, THE PREDICTION OF WHAT DRIVERS ARE LIKELY TO BE INVOLVED IN VIOLATIONS AND ACCIDENTS, AND THE SPECIAL CATEGORIES OF "PROBLEM DRIVERS."

AT THE SAME TIME, WE WILL BEGIN TO EXAMINE THE WAY IN WHICH OUR DEFINITION OF THE HIGHWAY SAFETY PROBLEM HAS INFLUENCED OUR RESPONSE; HOW, IN FACT, THIS DEFINITION HAS DETERMINED OUR ATTEMPTS AT SOLUTIONS.

OUR SECOND OBJECTIVE FOCUSES ON YOUR ROLE WITHIN THE COURT. WE WILL ASK YOU TO WORK TOGETHER TO DETERMINE WHETHER IT IS APPROPRIATE FOR THE COURT TO SEE EVERY VIOLATOR AND TO CONSIDER THE NEED FOR THE CONCENTRATION OF COURT RESOURCES UPON THE IDENTIFIABLE PROBLEM DRIVER.

WHILE IT IS IMPORTANT TO DETERMINE THE BEST POSSIBLE USE OF COURT TIME AND EFFORT, IT IS EQUALLY IMPORTANT TO ASSESS THE EFFECTIVENESS OF SANCTIONS AND COUNTERMEASURES EMPLOYED BY THE COURT. WE WILL DISCUSS THE RESULTS OF RECENT RESEARCH EVALUATING THE EFFECTIVENESS OF VARIOUS SANCTIONS AND COUNTERMEASURES. SUCH RESEARCH AND YOUR OWN EXPERIENCE IN THE COURT SHOULD LEAD US TO A CONSIDERATION OF EVALUATION - THE CONTINUING EVALUATION OF THE EFFECT OF COUNTERMEASURES - AS AN INDISPENSIBLE TOOL FOR THE SOLUTION OF OUR HIGHWAY SAFETY PROBLEM.

FINALLY, OUR THIRD OBJECTIVE ASKS US TO RECONSIDER THE ROLE OF THE TRAFFIC COURT JUDGE AS IT EXTENDS BEYOND HIS COURTROOM TO OTHER ELEMENTS IN THE HIGHWAY SAFETY SYSTEM AND, POTENTIALLY, TO HIS ENTIRE COMMUNITY. WE WILL EXPLORE THE CONCERNS AND PROBLEMS OF SOME OF THESE OTHER SYSTEM ELEMENTS, INCLUDING THE HIGHWAY DEPARTMENT AND LAW ENFORCEMENT OFFICIALS. YOU, FROM YOUR VANTAGE POINT AS JUDGES, HAVE A UNIQUE OPPORTUNITY TO ASSIST THESE ELEMENTS TO WORK

TOGETHER TO REDUCE THE LOSS OF LIFE AND PROPERTY ON OUR NATION'S HIGHWAYS.

TO ACCOMPLISH THESE OBJECTIVES WE WILL BE ENGAGED IN A VARIETY OF ACTIVITIES. AT TIMES YOU WILL BE WORKING TOGETHER IN SMALL GROUPS WITH GROUP LEADERS WHO WILL PROVIDE YOU WITH APPROPRIATE RESEARCH INFORMATION. THE SUCCESS OF THIS WORKSHOP DEPENDS UPON THE SHARING OF INFORMATION, EXPERIENCE AND EXPERTISE WITHIN THESE GROUPS. FREQUENTLY, EACH SMALL GROUP WILL PRESENT THE RESULTS OF ITS DISCUSSION TO ALL OF US IN A GENERAL MEETING. AT OTHER TIMES SPEAKERS WILL OFFER ADDITIONAL INFORMATION IN A MORE FORMAL PRESENTATION. AT ALL TIMES WE WILL BE TRYING TO EVALUATE THE INFORMATION PRESENTED FOR THE DEVELOPMENT OF JOINT SOLUTIONS TO THE HIGHWAY SAFETY PROBLEM.

WE HOPE YOU WILL FIND THIS WORKSHOP STIMULATING AND USEFUL IN YOUR WORK AS JUDGES. WE REALIZE THAT WE CANNOT POSSIBLY DEAL WITH ALL ASPECTS OF HIGHWAY SAFETY IN THIS SHORT PERIOD OF TIME. AT THE CONCLUSION OF THE WORKSHOP, WE WILL PROVIDE YOU WITH A REFERENCE MANUAL THAT CONTAINS ABSTRACTS OF THE INFORMATION USED IN VARIOUS ACTIVITIES AND A BIBLIOGRAPHY OF RELATED MATERIALS FOR YOUR FURTHER REFERENCE.

I WOULD NOW LIKE TO TURN THE PROGRAM OVER TO ______________________
WHO WILL EXPLAIN THE FIRST SERIES OF ACTIVITIES.

# Exercise I

## Definition of the Problem

## Purpose and Description

Purpose: This exercise is designed to accomplish initial team-building among small groups of participants and to involve both individuals and groups in the content and objectives of the workshop. The exercise focuses on the common assumptions underlying much of our highway safety system and traffic court practices. It encourages participants to examine and question these assumptions in light of recent research and their own experience. Through this examination, participants will jointly redefine the problem of highway safety. They also will consider the way in which the definition of the problem influences the choice of possible solutions and will make recommendations for possible action based upon their own redefinition of the problem. The exercise sets a tone of participant involvement in the workshop and underscores in summary the major issues to be treated in the remainder of the workshop sessions.

Description: After the introduction to the workshop by the conference chairman, a trainer or the chairman will give instructions to the participants for the small group meetings that follow. Each group will be given a question dealing with some aspect of the problem of highway safety and will be asked to discuss this question in their meeting. The question will be accompanied by summary statements of the common assumptions about highway safety that appear to answer it. The trainer in each group will be well-acquainted with the research material relating to the group question and will make this material available to the group.

The group will discuss their question, its related assumptions and the results of recent research that support or contradict these assumptions. They will examine the implications or conclusions that can be drawn from this data and will make recommendations for possible action and solutions in dealing with this aspect of the highway safety program.

Small group task sessions will be followed by a total group meeting. Representatives of each group will present the results of their discussion, summarizing research data, implications, conclusions and recommendations for action. Cross-group discussion will be encouraged and facilitated by the trainers.

Research Data by Group and Question: The following statements summarize the results of the research data provided to each group.

Group 1 - By whom are traffic violations committed and when do such violations result in crashes? Research data shows that traffic violations are committed by the average driver and result in crashes when his driver performance does not match the demand of road and vehicle design and condition (system demands). While the average driver consistently makes mistakes, even higher driver performance can result in crashes when the system demands are also high (poor road conditions, faulty vehicle, etc.). Conversely, low driver performance will not necessarily result in crashes if the system demands are also low (good roads, little traffic, etc.).

Group 2 - Is it possible to reliably identify and predict who will be involved in crashes? Research shows that there is low correlation between previous violations and future crashes. Reviewing individual driver history is not a reliable means of identifying or predicting the driver who will be involved in crashes. With the exception of the problem drinker-driver, removing traffic violators with past records from the road would not greatly reduce the highway safety problem.

Group 3 - Who is the problem driver? Research demonstrates that problem drivers, those most frequently involved in crashes, largely belong to three categories: the problem drinker, the young and the elderly. While these groups deserve special attention, it should be recognized that the membership of the young and the elderly groups is constantly changing. Research also shows that the young driver is a "problem" not because of his age, but because of his inexperience.

The elderly driver presents the problem of gradually decreasing driving abilities in a system with increasing driver demand. Research also shows that alcohol seriously effects driver performance only when the alcohol intake is excessive according to amount, time in which consumed and the physical characteristics of the individual.

Group 4 - What is the effectiveness of education and rehabilitation countermeasures in correcting the driving performance of traffic violators? Current research data concludes that instruction in better driving skills and attitudes can correct driving performance only among certain groups of violators over a short period of time. Neither education nor rehabilitation countermeasures appear to be cost effective in reducing violations and therefore crashes.

## Notes to Trainers

Instructions to Participants: The chairman or a trainer should read the instructions to participants after the introductory speech and before small groups meet.

The Group Task: This exercise is task-oriented, in that each small group is expected to produce specific results - a report - that responds to the group question. Your role as facilitator of the group discussion should focus on assisting the group in accomplishing its tasks. By the conclusion of the discussion, the group should reach agreement (or agree to disagree) on the following:

- The answer to the group question.
- The relationship of this answer to the common assumptions about this aspect of highway safety.
- The relationship of this answer to the research data provided.
- Recommendations for action or solution of this aspect of the highway safety problem.

The Group Representative: The group should select one of the group members as its representative to report the results of its discussion in the general meeting that follows. You should not become the representative, but you should assist the group in selecting him.

Trainer's Role: You will act as a discussion facilitator and as an expert resource in providing the results of research pertaining to the group question. You will guide the group in examining and evaluating the data, drawing implications and conclusions and recommending action.

- Begin the discussion by asking the members of the group to comment on the question and corresponding assumptions before you distribute the research abstracts. (If the group requests the abstracts immediately, ask them if they would rather have the opportunity to discuss the question with regard to their own experience as judges and without reference to additional resources until a later point in the exercise. If they continue to request abstracts distribute them without argument.) Your role here is to elicit as many opinions as possible, without approval or disapproval, and to encourage the group to listen to each other's opinions, share information and begin to use each other as resources.

- When most opinions have been expressed, offer the research abstracts as additional resources to the discussion. Allow time [illegible] members of the group to read the materials, then ask them to discuss them in light of the question and previous discussion.

- During all of the discussion, you may express opinions as a resource, but your views should not dominate the group. If questions of procedure or result are called to a vote, you should not participate in the voting. Group decisions must be their own and made without undue influence from the trainer.

- Near the conclusion of the session, ask the group to summarize the results of their discussion for their group representative, so that he may report them accurately in the general meeting. Remind the group and its representative that only 10 minutes will be allowed for their presentation.

- While all participants will receive copies of all research data at the conclusion of the workshop, in this initial exercise only your group will have the particular research information that relates to their question. Thus it is important that the group summarize whatever data they feel is significant in his presentation to the total group. Remind your group that such summaries will ensure the sharing of [illegible] research information among all groups.

The General Meeting: The chairman or a trainer should take the leadership of this meeting, but his duties should be confined to:

- Beginning the meeting. Call all participants together and ask Group 1 to give its report.
- Time-Keeping. Each group presentation (report and discussion) is limited to ten minutes. The leader must "call time" when each ten-minute presentation period has ended and ask for the next group report.
- Wrap-up. The leader should thank the groups for their reports, assuring them that the remainder of the workshop will continue to make extensive use of the work they have done. He should then introduce the speaker for the next presentation, "More than a Minute."

# INSTRUCTIONS TO PARTICIPANTS

BEFORE WE CAN CONSIDER VARIOUS APPROACHES TO THE PROBLEM OF HIGHWAY SAFETY AND THE ROLE OF THE JUDGE IN RELATIONSHIP TO THESE APPROACHES, WE SHOULD BE CERTAIN WE ARE IN AGREEMENT ON THE NATURE OF THE PROBLEM. AS IN ANY PROBLEM-SOLVING SITUATION, THE ANSWER TO THE QUESTION, "WHAT SHOULD WE DO?", WILL LARGELY BE DETERMINED BY THE WAY WE DESCRIBE AND DEFINE THE PROBLEM ITSELF.

A PHYSICIAN MUST ASK HIMSELF THE QUESTION, "HOW CAN I IMPROVE MY PATIENT'S HEALTH?". THE FIRST STEP IN ANSWERING THAT QUESTION IS THE DEFINITION OF THE PATIENT'S PROBLEM - EXACTLY WHAT IT IS THAT IS CAUSING HIS ILLNESS. WITH A CLEAR IDENTIFICATION AND DEFINITION OF THE ILLNESS, OR PROBLEM, THE CHOICE OF TREATMENT, OR SOLUTION, IS MORE LIKELY TO BE ACCURATE AND EFFECTIVE.

SIMILARLY, A TEACHER FACED WITH A MISBEHAVING CHILD, ASKS THE QUESTION, "HOW CAN I IMPROVE HER LEARNING?" HE MAY ASSUME THAT THE CHILD'S PROBLEM IS ONE OF DEFIANCE AND LAZINESS AND HE WILL TRY TO SOLVE THIS PROBLEM BY KEEPING HER AFTER SCHOOL OR SENDING HER TO THE PRINCIPAL'S OFFICE. HOWEVER, THE CHILD MAY HAVE POOR HEARING OR POOR EYESIGHT, SO THAT THE TEACHER'S ASSUMPTIONS LED TO ATTEMPTS AT SOLUTIONS THAT WERE AT BEST IRRELEVANT, AND AT WORST DESTRUCTIVE.

WE ARE ASKING THE QUESTION, "HOW CAN WE IMPROVE HIGHWAY SAFETY?". THE WAY IN WHICH WE DEFINE THE PROBLEM OF HIGHWAY SAFETY HAS AND WILL

CONTINUE TO DETERMINE THE KINDS OF SOLUTIONS WE EMPLOY. THE PROBLEM IS CERTAINLY ONE OF THE MOST COMPLEX IN OUR SOCIETY. IN THE NEXT WORKSHOP SESSION WE ARE ASKING YOU TO DISCUSS AND ANSWER QUESTIONS ABOUT THE DEFINITION OF THE PROBLEM OF HIGHWAY SAFETY BY EXAMINING COMMON ASSUMPTIONS IN LIGHT OF YOUR OWN EXPERIENCE AS JUDGES AND IN REGARD TO RECENT RESEARCH IN THE FIELD.

SPECIFICALLY WE WANT TO EXPLORE POSSIBLE ANSWERS TO THE FOLLOWING QUESTIONS:

1. BY WHOM ARE TRAFFIC VIOLATIONS COMMITTED AND WHEN DO SUCH VIOLATIONS RESULT IN CRASHES?
2. IS IT POSSIBLE TO RELIABLY IDENTIFY AND PREDICT WHO WILL BE INVOLVED IN CRASHES?
3. WHO IS THE PROBLEM DRIVER?
4. WHAT IS THE EFFECTIVENESS OF EDUCATION AND REHABILITATION COUNTERMEASURES IN CORRECTING THE DRIVING PERFORMANCE OF TRAFFIC VIOLATORS?

YOU WILL MEET IN THE SMALL GROUPS TO WHICH YOU HAVE BEEN ASSIGNED AND EACH GROUP WILL DISCUSS ONE OF THESE QUESTIONS. YOU WILL BE PROVIDED WITH THE QUESTION AND WITH A STATEMENT OF THE COMMON ASSUMPTION THAT APPEARS TO ANSWER THAT QUESTION. YOUR TRAINER WILL PROVIDE YOU WITH SUMMARIES OF RESEARCH DATA THAT RELATES TO YOUR GROUP QUESTION.

YOU SHOULD EXAMINE AND EVALUATE BOTH THE ASSUMPTION AND THE RESEARCH DATA, MAKING USE OF THE EXPERIENCE AND EXPERTISE OF THE MEMBERS OF YOUR GROUP TO ARRIVE AT AN ANSWER TO THE GROUP QUESTION. AT THE CONCLUSION OF YOUR DISCUSSION WE WILL MEET TOGETHER AGAIN HERE AND A REPRE-

SENTATIVE OF YOUR GROUP SHOULD BE PREPARED TO PRESENT THE RESULTS OF YOUR MEETING. THESE REPORTS SHOULD INCLUDE THE CONCLUSIONS YOU HAVE REACHED IN ANSWERING YOUR GROUP QUESTION; A SUMMARY OF THE RESEARCH DATA YOU FEEL IS APPLICABLE AND HOW IT RELATES TO THE COMMON ASSUMPTIONS ABOUT THE QUESTION; AND ANY RECOMMENDATIONS YOU MAY HAVE ABOUT FUTURE ACTION AND SOLUTIONS. THESE GROUP REPORTS WILL BE LIMITED TO TEN MINUTES EACH.

ARE THERE ANY QUESTIONS IN REGARD TO THIS EXERCISE? IF NOT, PLEASE REPORT TO YOUR SMALL GROUPS NOW, WHERE YOUR TRAINER WILL DISTRIBUTE YOUR DISCUSSION MATERIALS AND REVIEW THESE INSTRUCTIONS WITH YOU.

## Definition of the Problem

Question: By whom are traffic violations committed and when do such violations result in crashes?

| ASSUMPTION | IMPLICATION | ACTION |
|---|---|---|
| Traffic violations are committed by a limited number of drivers who make errors in their driving performance which may result in crashes. | A. People who commit traffic violations were driving irresponsibly. | → A. The judge should see everyone who commits a traffic violation. |
| | B. If this limited number of drivers were taken off the road, the highway safety problem would be greatly reduced. | → B. One of the judge's primary responsibilities is to take this group of drivers off the road. |
| | C, The average driver seldom makes mistakes and is not often involved in crashes. | → C. The judge will seldom have cause to see the average driver. |

## Research Abstract

### Source:

Stonex, K.A., "Law, Traffic and Engineering Technology," Highway Research Board Special Report 86: A Colloquy on Motor Vehicle and Traffic Law, National Academy of Sciences - National Research Council, 1965.

### Discussion:

The author, an automotive safety engineer at the General Motors Technical Center, notes that we have attempted to legislate regulations for the "proper path and action and conduct of every driver along every foot of the road every minute of the day and night, so that no drivers who follow these definitions, or regulations, faithfully should ever be involved in an accident."

At the same time he reports that since Proving Ground Drivers run off the road once every 24,000 miles because of human failure, it stands to reason that those of us in the general public must fail more frequently.

The author combines the inevitability of human failure with the frightening fact that as we drive a typical 4000-lb. car we guide a "projectile with kinetic energy equivalent to 165 30-06 deer-rifle bullets, or more than one-tenth that of our best anti-tank weapon - possibly the equivalent of a 105-mm. howitzer."

He reports that it is surprising in light of these factors that we do not have more serious accidents.

### Conclusions:

The author takes the strong position that the highway traffic fatality problem will not be solved by additional regulations defining proper conduct or by improved enforcement or court procedures.

"Reductions can be made only by recognizing that our highway network does not leave room enough for the occasional unreliability of us drivers...The solution is to remove the obstacles, trees and rocks and sharp ditches, and opposing traffic."

Stonex cont.

Recommendations:

The application of engineering technology to our highways will reduce the number, cost, and severity of accidents. Specifically favored is removing the solid obstacles and converting roadways to one-way operation.

## Research Abstract

Source:

Hutchinson, Cox and Maffet, "An Evaluation of the Effectiveness of Televised, Locally Oriented Driver Reeducation," Highway Research Record 292 (1969) cited in

Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

Discussion:

Three researchers from the University of Kentucky studied driver behavior at eight intersections in urban and rural locations in Lexington-Fayette County, Kentucky. Eleven types of driver errors were observed and reported.

The errors were recorded on 16 mm film. The films were subsequently shown on local television.

Prior to the broadcasts, with all of the normal inducements to safe driving present - traffic laws, safety campaigns, and tort liability for accidents resulting from negligent conduct - more than a quarter of the drivers committed an error at the intersection studied.

After the films were televised, the proportion of drivers committing errors dropped only slightly. Over 20 percent of the drivers observed and committed at least one error.

Conclusions:

In spite of the claim by the researchers that the program was a success since it reduced the incidence of both errors and accidents, even the reduced level reflected errors by more than 20 percent of the observed drivers. "At least at intersections, driver errors are common and resistant to change even in the presence of unusual (measures)."

## Research Abstract

### Source:

Boek, "Automobile Accidents and Driver Behavior," Traffic Safety Research Review (December, 1958) cited in

Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

### Discussion:

The New York State Department of Health conducted a "car-following" study by observing a random sample of drivers from another car without the drivers' knowledge for a distance of between one and two miles.

The drivers were scored in 9 areas - such as speed, observation of lane markings, yielding - as "safe" and "unsafe."

The report found that no driver was rated entirely unsafe (committed errors in all 9 areas), 48 percent were judged entirely safe (committed no errors). One half of the observed population operated their vehicle so that at least one error was observed in the one-to-two mile trip.

## Research Abstract

Source:

Edwards and Hahn, Filmed Behavior as a Criterion for Safe Driving, American Institutes for Research (Washington, D.C., February 1970) cited in Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

Discussion:

The American Institutes for Research published a study in February, 1970, describing the behavior exhibited by average urban male drivers.

A sample of 300 white male District of Columbia resident operators was filmed from a following truck. The films were then evaluated by the police officers and a traffic safety expert. The drivers were rated on their performance. The sample was biased toward middle-aged "white-collar" drivers.

The perhaps unexpected result was that the average driver committed more than nine errors (e.g. failure to stay in lane, turning without signalling, speed) in five minutes of urban driving. In addition, the average driver committed nearly four different kinds of errors.

The researchers then viewed the accident records of the drivers before and after the 1962 observation. The average number of errors per driver for the accident-free group was 9.84, while that for the drivers involved in two or more accidents for the prior period was only 11.14. The authors concluded that "the difference, while it does exist, hardly indicates a striking dichotomy with regard to observable behavior behind the wheel between accident-free and accident-involved drivers."

Conclusions:

Considering the bias of the sample in favor of those operators usually considered less likely to be involved in crashes, the number of driving errors is striking.

This study suggests most drivers commit errors regularly.

## Research Abstract

Source:

Blumenthal, Murray, "Dimensions of the Traffic Safety Problem," presented to the Automotive Engineering Congress, Detroit, Michigan. January [illegible].

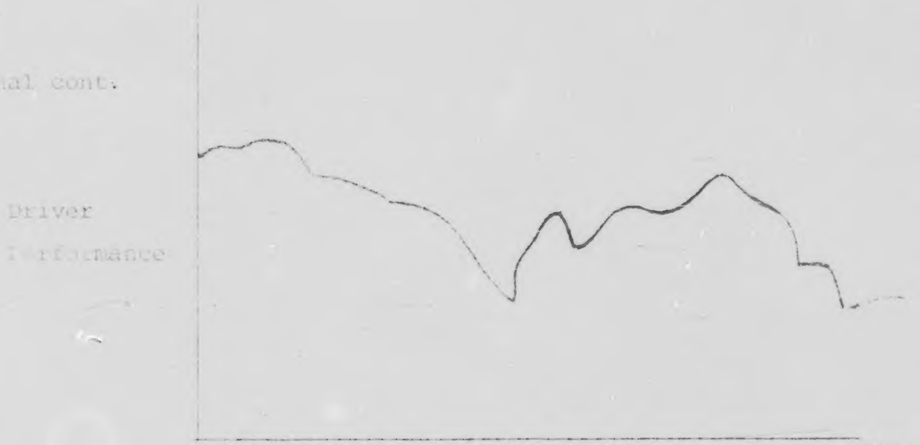
Discussion:

The presentation attempts to place traffic safety in a broader framework than traffic accident statistics which "describe not the problem, but its symptom."

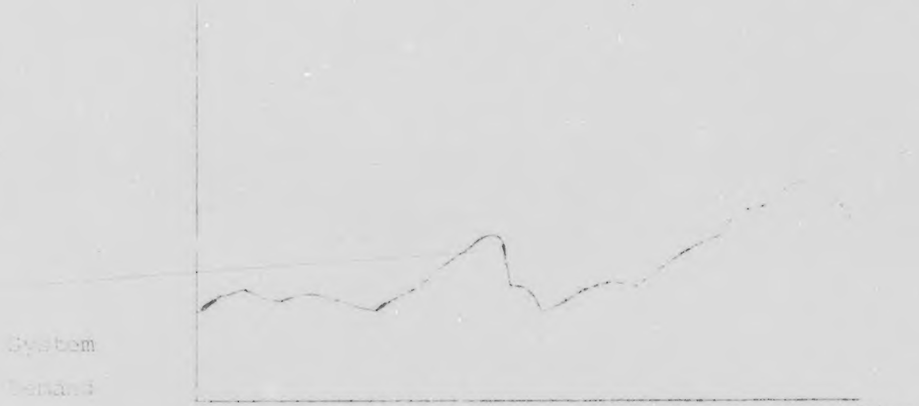
The author proposes that accidents are inevitable when one realizes the imbalance between the technology of the motor vehicle transportation system and the demands made upon driver capabilities. The driver is expected to compensate by his decisions for the vehicle, the highway, and his fellow driver. It is remarkable that he does so most of the time. But every year about 25 percent of all drivers cannot meet the demands made upon them.

Graphically, the performance of a normally competent driver varies - at times he is more or less careful, distracted, fatigued, etc. (Fig.1). The demands made upon the driver vary - poor weather, congestion, uncontrolled access, etc (Fig. 2). When the system demands exceed driver capability or alternatively, if driver performance does not meet the system demands, an accident occurs (Fig. 3).

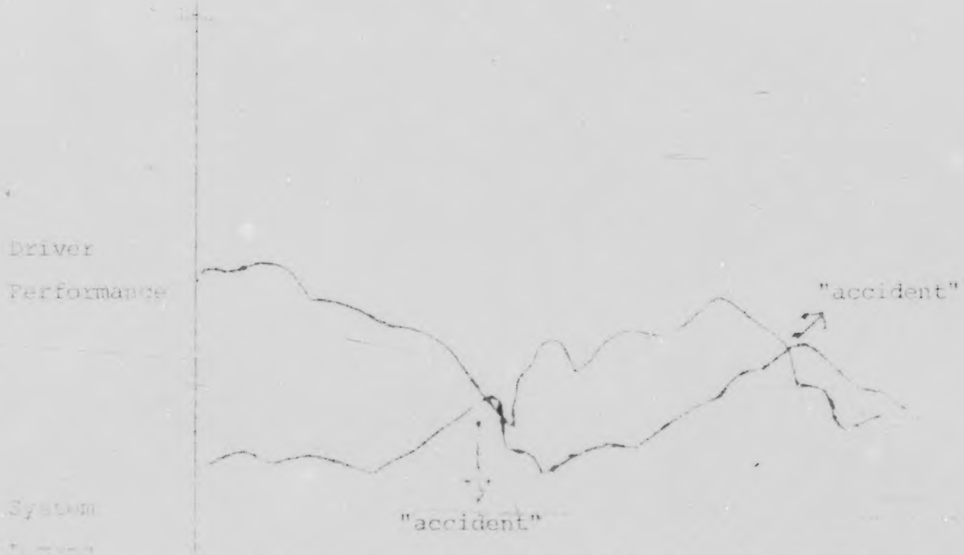
Blumenthal cont.



(Figure 1)



(Figure 2)



(Figure 3)

Blumenthal cont.

Accidents thus become a problem for most drivers. If one considers the performance curves for drivers who are inexperienced, aged, or problem drinkers, the likelihood of an accident is even greater. Modification of the road design - reducing performance demands and increasing the "forgivingness" of the road - inevitably will reduce system failures (accidents).

### Conclusions:

In a society which promotes industrial safety under the principle that every type of accident which may occur should be anticipated and safeguards should be provided, the notion that "if only drivers were more careful, accidents wouldn't happen" is inappropriate. Society should promote highway safety by anticipating human failure and therefore providing safer vehicles and less demanding, more "forgiving" roadways.

### Recommendations:

Society should recognize that human failure on the highway is unavoidable and predictable. Given the human cost of accidents, society should apply its technological, political and economic resources to the improvement of all elements of the system.

## Definition of the Problem

Question: Is it possible to reliably identify and predict who will be involved in crashes?

| ASSUMPTION | IMPLICATION | ACTION |
|---|---|---|
| There is a high correlation between previous violations and future crashes, i.e., drivers with several violations are very likely to be involved in crashes. | A. It is possible to identify/predict who will be involved in crashes by reviewing individual driver history. | A. The number of previous traffic violations should be a critical factor in the judge's evaluation of any case. |
| | B. If all traffic violators with past records were taken off the road, the highway safety problem would be greatly reduced. | B. The judge should work to identify the repeated traffic violator and take him off the road. |

## Research Abstract

### Source:

Forbes, T.W., "The Normal Automobile Driver As a Traffic Problem," Journal of General Psychology, Vol. 29, p. 471 (1939).

### Discussion:

In 1939, Forbes pioneered efforts in determining the relationship between traffic violations and accidents. As a member of Yale University's Bureau for Street Traffic Research, he analyzed the records of almost 30,000 Connecticut drivers between 1931 and 1936.

His studies refute the hypothesis that most accidents result from the actions of "accident-prone" drivers. In fact, if persons with two or more accidents in three years were removed from the road for the next three years, then in those next three years 96.3 percent of the accidents would happen anyway because they would involve other drivers. It is the so-called "normal driver," not the driver with a record of past accidents, who is involved in the overwhelming percentage of the accidents.

### Conclusion:

The "normal driver" constituted 98.7 percent of the driver group studied and caused 96.3 percent of the accidents.

## Research Abstract

### Source:

Peck, McBride and Coppin, *Accident Analysis and Prevention*, Vol. 2, No. 4, p. 243, 1971.

### Discussion:

The authors hoped to determine whether a driver's past violation record was a good predictor of future accident involvement.

Their concern is based on the policy question of whether concentration on the accident repeater through rehabilitative and/or restrictive measures will substantially reduce accidents.

They found that "the low stability index for accidents indicates that the accident population is largely composed of different drivers from year to year... of those drivers who were accident involved in both 1961 and 1962, 87 percent were accident free in 1963. Conversely the previously accident-free drivers accounted for the vast majority of the accidents in 1963."

### Conclusions:

Programs focusing on the accident repeater can not be expected to bring about a substantial reduction in accidents because the repeater is only a small part of the problem.

### Recommendations:

"This, of course, does not mean that accidents cannot be reduced through selective application of driver improvement action, or that driver improvement programs should be discarded. What these findings do indicate is that selective driver improvement efforts should be based on realistic objectives and evaluated accordingly."

## Research Abstract

Source:

State of California, Department of Motor Vehicles, The 1964 California Driver Record Study - Part 4: The Relationship Between Concurrent Accidents and Citations, May, 1965.

Discussion:

In the 1964 study, a random sample of 225,000 California driving records were reviewed. The records were placed on computer tapes and analyzed. To be considered, the subject's record had to be complete for 3 years prior to the study.

This part of the study was concerned with the relationship between a driver's conviction for moving traffic violations and traffic accidents. The report was concerned with the question:

If one knows a driver's record of convictions for moving traffic violations, how sure can he be that the driver has also been involved in a traffic accident?

Conclusion:

There is a low correlation between citation (conviction for moving traffic violations) and accident involvement.

## Research Abstract

Source:

Insurance Institute for Highway Safety, "North Carolina Study Finds 'Repeater Theory Weak'," Status Report, Vol. 6, No. 13, July 12, 1971. This article is quoted in full under Discussion.

Discussion:

Most highway crashes involve drivers with no record of traffic violations in the preceding two years, not recent "repeaters," according to a North Carolina analysis.

And, "If you took all drivers with three or more violations in the past two years off the highway and kept them off 100 percent effectively for the whole (next) two years, North Carolina would still experience 96.2 percent of the accidents it would have had anyway," says Dr. B.J. Campbell, Director of the Highway Safety Research Center at the University of North Carolina and the author of the analysis.

(Actually, according to a California Department of Motor Vehicles Study, some 33 percent of drivers whose licenses are suspended and 68 percent of those whose licenses are revoked continue to drive anyway. On that basis, 100 percent effectiveness of driver removal is generally considered impossible by Dr. Campbell and others in the highway loss research field.)

Campbell's study, summarized in the spring issue of "Signal 99," a publication of the North Carolina Governor's Highway Safety Program, was based on an analysis of more than two million North Carolina drivers' records.

Not only did the study find that the relationship between crashes and past violation histories is "weak" for most drivers, it also found that 80.7% of North Carolina drivers who have crashes in a two-year period do not have crashes in the next two-year period.

"...the fact is that the overwhelming majority of people who have an accident in one time period do not have an accident (in) the next time period," said "Signal 99" in characterizing the study.

Insurance Institute cont.

A notable exception to the finding, it added, is the abusive drinker who drives. North Carolina drivers with a history of drunken driving during one two-year period were found to be involved in more accidents than the average driver during the next two years, the publication quoted a state Department of Motor Vehicles statistician as reporting.

Campbell concludes on the basis of this study that highway safety administrators must "modify the belief that the repeater is the main source of trouble on the streets and highways...It is wrong to lead people to believe that by concentrating chiefly on the accident repeater we will make substantial inroads on the problems of traffic safety in North Carolina or the nation."

Conclusion:

The same small minority of drivers does not consistently cause the majority of serious accidents. Each year a substantially different group of drivers is involved in accidents.

Recommendations:

Focusing on the accident repeater will not bring about a large reduction in total accidents.

## Definition of the Problem

Question: Who is the problem driver?

| ASSUMPTION | IMPLICATION | | ACTION |
|---|---|---|---|
| People who drink shouldn't drive. | A. Drinking any amount of alcohol seriously effects driving performance. | → | A. Anyone convicted of drinking-driving should be removed from the road. |
| People would have significantly better driving records if they started driving at later ages. | A. Age alone is a critical factor in the quality of driver performance. | → | B. Youthful driving offenders should be removed from the road. |
| The elderly driver drives slowly but safely. | C. Elderly drivers are seldom involved in violations or accidents. | → | C. The court will seldom have occasion to see the elderly driver. |
| Drivers with a history of repeated violations are dangerous drivers. | D. Most drivers with a history of violations can be expected to get involved in crashes. | → | D. All repeater violators should be taken off the road. |

## Research Abstract

Source:

Bacon, Selden D., (ed.), "Traffic Accidents and Violations - An Abstract," *Quarterly Journal of Studies on Alcohol: Studies of Driving and Drinking*, Supplement No. 4, May 1968.

The abstract is quoted in full below.

Discussion:

In California, a comparison was made of the types of accidents and violations incurred by 256 drivers with alcoholism as a primary diagnosis, 126 drivers with another medical condition and a drinking problem as a secondary diagnosis, 1,319 drivers with other medical conditions and no drinking problem, and 921 drivers with no known medical condition. Alcohol impairment was measured in 33% by blood or breath alcohol determination and in the remainder by a "sobriety field test."

Conclusions:

The following differences in accident and violation patterns were found: (1) 60% of accidents involving persons with primary alcoholism, 30% involving persons with a secondary drinking problem and 10% involving persons with other medical conditions or none occurred after drinking. (2) It is estimated that alcoholic drivers, representing 6.5% of the drivers in California, are responsible for between 41 and 62% of accidents after drinking in the State. (3) Alcoholic drivers were innocent victims in only 1 out of 8 of their accidents, those with another medical condition in 1 out of 3, and drivers with none in 1 out of 2 of their accidents. (4) Accidents in which the driver was drinking but was thought not to be impaired resembled accidents in which the driver was known to be impaired more than accidents in which he was sober, suggesting significant impairment without overt intoxication and, if drinking can be identified, impairment may also be assumed. The need for implied-consent legislation suggests itself.

Bacon cont.

(5) Accidents involving alcohol were more likely to be single-vehicle accidents, or collisions with parked or stopped cars, than accidents during sobriety. Drivers with alcoholism and other medical conditions had a greater proportion of such accidents when sober than drivers in the comparison group. (6) Though no appreciable difference between alcohol and nonalcohol accidents appeared in the number of people injured per accident fewer were at risk in alcohol accidents because more of them involve a single vehicle or parked car...Injuries per number of people exposed would therefore be more. (7) Drinking accidents of alcoholic drivers were distributed throughout the day more evenly than accidents of nonalcoholic drivers, and they were more likely to occur between 6 AM and noon. (8) 20% of nonaccident violations by alcoholic drivers were for drunken or reckless driving in comparison with 2% by other groups. (9) Persons with alcoholism and other psychosocial disorders had 1½ times as many violations for vehicle defects as persons with organic medical conditions and persons with none. (10) The proportion of convictions for driving with a suspended or revoked license or without a license in possession was twice as great for drivers with alcoholism as for drivers with other medical conditions.

# Research Abstract

## Source:

Proceedings of National Highway Safety Bureau Priorities Seminar, Vol. 2: "Alcohol and Highway Safety Countermeasures, Part IV-Identification of Problem Drinkers," Fredericksburg, Virginia, July 18-20, 1969.

## Discussion:

Problem drinkers record high blood alcohol levels seldom found in the social drinker. The problem drinker is involved in a significant number of fatal accidents. The seminar hoped to identify several characteristics which might be used to identify the problem drinker.

## Conclusions:

Problem drinkers are characterized by:

1) an extremely high blood alcohol level;

From a third to a half of all fatally injured drivers who have been drinking have blood alcohol levels over 0.15 percent, a level which is found in non-accident drivers less than 1 percent of the time.

2) one or more previous arrests involving alcohol;

Approximately a third of drivers who are convicted for drunk driving will repeat as offenders.

3) previous contacts with social agencies and medical facilities;

4) medical signs of alcoholism;

A researcher found that among traffic fatalities with blood alcohol levels of 0.15 percent or higher at the time of their death, 62 percent had cirrhosis and 77 percent had previous arrests and/or cirrhosis. For sober drivers who were fatally injured, 15 percent had cirrhosis and 22 percent had cirrhosis plus previous arrest.

5) a psychological dependence on alcohol;

6) reports of heavy drinking, marital problems and job absenteeism.

Proceedings cont.

Recommendations:

Procedures should be developed to determine if any or all of these characteristics are found in the individual driver. (For example, DWI defendants might be given a medical examination or thorough pre-sentencing reports on drivers might be required. In addition to the identification of the problem drinker as differentiated from the social drinker, the selection of appropriate treatment for the problem drinker might be made.

## Research Abstract

Source:

Goldstein, Leon G., "Youthful Drivers as a Special Safety Problem," The Young Driver: Reckless or Unprepared? North Carolina Symposium on Highway Safety, Fall 1971.

Discussion:

For young people between the ages of 15 and 24, motor vehicle accidents are the leading cause of death. This fact raises many questions:

- Are high accident rates a necessary consequence of allowing the young to drive?
- Can we better prepare youth?
- What type of training should be emphasized?

In his article, Dr. Goldstein makes an extensive review of the research on the young driver. He discusses data on the relative contribution of inexperience as opposed to age *per se*. Finally, he discusses the personality characteristics of the youthful driver as related to driving records.

Conclusions:

Although a controversial finding, Dr. Goldstein concludes that while both inexperience and age *per se* play a part, experience is perhaps the greater determiner of accident involvement.

He finds young drivers with poor records exhibit personality characteristics that reflect greater hostile, aggressive and impulsive tendencies. He reports that the involvement of alcohol in highway fatalities of young people may not be greatly less than in the case of older adults. Although the role of drugs in accidents involving youth has not been extensively studied, it appears that drugs have a far less involvement than does alcohol. He believes little can be done to change the conditions which make adolescence a turbulent period. In light of this, he stresses efforts to improve the crash worthiness of vehicles and the design of highways.

Goldstein cont.

Recommendations:

Dr. Goldstein urges special programs to improve the performance of the youthful driver; programs based on further research and designed to deal with the modification of those characteristics commonly found in the adolescent driver.

Group 3

Exercise I

## Research Abstract

Source:

Abt Associates Inc., Alcohol-Highway Traffic Safety for Law Enforcement Officials, a workshop manual prepared for the National Highway Traffic Safety Administration (footnotes omitted).

Discussion:

Experts have found that drinking and driving can mix when the drinking is moderate or when considerable time elapses between the period when the person drinks and when he drives. The one or two drinks a social drinker might have before driving are not likely to affect his driving ability significantly.

The degree to which a driver's ability to drive may be impaired is directly related to the amount of alcohol in his bloodstream, or his Blood Alcohol Concentration (BAC). This BAC level is determined by four factors:

1. The amount of alcohol he drinks.
2. Whether the person has eaten before drinking.
3. How much the person weighs.
4. How long the person waits to drive after drinking.

According to the law in most states, a BAC of .10 or higher is presumptive evidence of intoxication. For a one hundred and eighty pound person to achieve a BAC of .10 he must have drunk 5½ drinks - beer or mixed drinks - in one hour or nearly seven drinks in a two hour period. This is the case if he has not eaten in three hours; if he has, it will require more alcohol to reach the BAC level at which he is legally drunk.

Frighteningly, most drunk drivers far exceed the BAC level to be considered merely legally intoxicated. They are excessive drinkers. According to one study, more than half of the people arrested for driving while intoxicated, or DWI, have BAC's over .20. For our example of a 180 lb. man who has not eaten recently, that is eleven drinks an hour. In the same study, over 97% of the DWI arrests were of people with BAC's over .15. At BAC of .15, a person is 25 times more likely to be involved in an accident than if he were sober.

Alcohol cont.

In contrast, the same man, having three drinks, BAC .06, is only about twice as likely to have an accident than when he is sober. Any more than 1½ drinks within an hour of driving will affect a person somewhat, but the degree to which he is affected varies greatly.

Conclusions:

The greatest and most predictable traffic safety danger for society is represented by the excessive or problem drinker. Although the social drinker may have impaired ability, his likelihood of accident involvement is far less than the problem drinker.

## Research Abstract

Source:

Campbell, B.J., Report in "Signal 99." North Carolina Governor's Highway Safety Program, Spring, 1971.

The report is quoted at length below.

Discussion:

In any given year in North Carolina, about 200,000 drivers are involved in accidents. This is approximately seven percent of all drivers in the North Carolina driving population. If the same seven percent caused the accidents year in and year out, the State could do something about it. On the other hand, if an entirely different seven percent of the drivers have an accident each year, then the State would be helpless in identifying those who may have future accidents.

The truth is somewhere in between, but the fact is that the overwhelming majority of people who have an accident in one time period do not have an accident the next time period. Indeed, 80.7 percent of N.C. drivers who have accidents in one two-year period do not have accidents the second two-year period.

A study of drivers in North Carolina shows approximately the same situation regarding past traffic law violations and their predictive value in determining who will have accidents. The analysis showed that a person's past driving record is statistically related to future accidents, but the relationship is weak. Indeed, analysis showed that most accidents involve drivers who had no records of traffic violations in the prior two years.

The following chart shows the number of accidents experienced over a two-year period by drivers with varying numbers of traffic violations during the preceding two years. The chart shows the difference in the accident experience of drivers with many violations and those with few or none, but this difference accounts for only a small portion of the accident toll. If all the drivers with three or more violations in the past two years were removed from the highway and kept off 100 percent effectively for two years, North Carolina would still experience 96.2 percent of the accidents it would have had anyway. Moreover, of the drivers removed, 71 percent would not have been involved in an accident.

Campbell cont.

| | | ACCIDENTS IN YEARS 3 & 4 | | | | | |
|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | TOTAL |
| VIOLATIONS IN YEARS 1 & 2 | 0 | 1,890,951 | 185,069 | 18,451 | 2,094 | 370 | 2,096,935 |
| | 1 | 247,266 | 43,379 | 6,759 | 1,012 | 229 | 298,645 |
| | 2 | 56,457 | 13,407 | 2,693 | 532 | 127 | 73,216 |
| | 3 | 15,862 | 4,647 | 1,078 | 247 | 73 | 21,907 |
| | 4 | 8,124 | 2,539 | 680 | 143 | 51 | 11,537 |
| TOTAL | | 2,218,660 | 249,041 | 29,661 | 4,028 | 850 | 2,502,240 |

Conclusions and Recommendations:

Dr. Campbell feels that all levels of traffic safety administration must modify the belief that the accident repeater is the main source of trouble on the streets and highways.

"The accident and violation repeater is a small part of the overall accident problem, and the state should (and does) have programs to deal with these people. But the great bulk of the accident problem lies with essentially 'normal' people who have accidents, and it is in this area that the bulk of our progress must come."

This would include information that would help the individual driver sharpen his skills, highway directive and warning signs and adequate markings that are easily understood, and cars designed and compatible with the human operator.

## Research Abstract

### Source:

North Carolina Symposium on Highway Safety, "Aging and Highway Safety: The Elderly in a Mobile Society," Fall 1972 (unpublished).

### Discussion:

On October 17 - 18, 1972, a symposium was conducted by the University of North Carolina Highway Research Center. The symposium discussed the rights of the older driver and pedestrian as they relate to society's need to impose limitations on the exercise of those rights.

The discussion dealt with two important factors: (1) the elderly's decreasing physical vigor and sensory activity and (2) the increasing performance demands of the modern highway system. These factors confront the need of the age for mobility and the need of society to protect itself.

### Conclusion:

Society should determine effective means of dealing with the aging driver. For example, licenses for the elderly which restrict their driving to specified conditions might be appropriate or periodic re-examination of driving skills might be required.

## Research Abstract

### Source:

Abt Associates Inc., *Alcohol-Highway Traffic Safety for Law Enforcement Officials*, a training manual prepared for the National Highway Traffic Safety Administration (footnotes omitted).

All studies are summarized in the 1968 Department of Transportation Report to Congress entitled "Alcohol and Highway Safety."

### Discussion:

Research has indicated that alcohol involvement by drivers and pedestrians is responsible for more deaths and accidents on the highway than any single factor. Specifically, drinking drivers and pedestrians contribute directly to about half of all traffic deaths and injuries. Most of these deaths, however, are not primarily the results of actions by what is commonly known as the "social drinker," but by the driver who drinks to great excess, the so-called "problem drinker." Alcoholics and other problem drinkers, who constitute less than 10% of all licensed drivers in the United States, account for a very large part of the overall problem. It appears, in fact, that two-thirds of those drinking drivers who are involved in accidents are problem drinker drivers.

Problem drinker drivers are those who have more than one arrest for offenses involving alcohol (including non-highway arrests) who are known to the various health and social agencies in their communities, and who often have a history of troubled relationships with their employers, their families, and their bank or creditors.

Most research indicates that there are about seven million plus problem drinker drivers on the highways today who are the primary hazard in terms of alcohol-related crashes; that is, one driver out of every 15.

Who are these drinking drivers? By and large they are not social drinkers. True, the social drinker sometimes gets really drunk and drives. Sometimes he kills people that way. But generally the social drinker does not drive at BAC levels like those of the people arrested for DWI.

Alcohol cont.

In a series of studies, drivers passing the places where accidents had taken place, at about the same time of day and week as the accidents, were stopped and their BAC level was measured. This should indicate what percentage of drivers were legally intoxicated at the time of the accident. An average of 2% of the drivers tested had BAC's in excess of .10. In contrast, between 29 and 50% of the drivers killed in car crashes had BAC's in excess of .10. In short, we are not dealing here with the social drinker who has a couple of drinks and drives home. We are dealing with drinkers who have been consuming great quantities of alcohol in a short period of time.

What careful studies have shown is that more than two-thirds of alcohol related fatalities involve so-called problem drinkers. That is over 28,000 deaths each year.

It is these alcoholics and other problem drinker drivers who are responsible for most of the alcohol-related accidents. For example, one study revealed that 80% of those arrested for DWI had histories of drinking problems, 60% had more than one previous alcohol-related arrest; and 35% had more than four. Most drivers arrested for DWI are not social drinkers who happen to have "one too many"; they are drinkers who regularly or frequently get drunk - and then often drive afterwards.

Conclusion:

There is a need to remove alcoholic and problem drinker drivers from the road.

Group 4 Exercise I

## Definition of the Problem

Question: What is the effectiveness of education and rehabilitation countermeasures in correcting the driving performance of traffic violators?

| ASSUMPTION | IMPLICATION | ACTION |
|---|---|---|
| The driving performance of traffic violators can be corrected through instruction in better driving skills and attitudes. | A. Education and/or rehabilitation countermeasures are effective in reducing violations and therefore crashes. | A. The judge should impose education and/or rehabilitation countermeasures on the traffic violator. |

Group 4

Exercise I

## Research Abstract

### Source:

State of California, Department of Motor Vehicles, "An Abstract of The Effectiveness of a Uniform Traffic School Curriculum for Negligent Drivers," June 1971.

(The abstract is quoted at length below.)

### Discussion:

The traffic violation repeater has been of concern to driver's licensing authorities and traffic safety administrators for many years. As a result, a variety of driver improvement programs has been implemented throughout the country in an attempt to rehabilitate and/or control the problem driver.

How successful are these driver improvement systems? In the case of court-mediated traffic school programs, very few evaluative studies have been reported and most of these are marred by serious methodological deficiencies. Evaluation has generally consisted of comparing driver records before and after subjects have attended traffic school without using a comparison or control group. One study reported that a 27 percent reduction in traffic convictions and a 40 percent reduction in accidents were found for subjects who attended a driver improvement course. Without a comparison or control group, however, it is impossible to assess whether these subsequent changes in driving record were due to traffic school or incidental factors such as experience, maturation, other treatment programs, statistical regression, etc.

The present study represents an attempt to establish the basis for an effective court-mediated educational program for problem drivers.

### Conclusions and Recommendations:

The study was designed to evaluate the effectiveness of a uniform traffic school curriculum developed for the traffic violation repeater. The evaluation indicated that attendance at the school resulted in an overall 11.8 percent reduction in accidents and a 6.2 percent reduction in convictions for male drivers. In addition, the effectiveness of the traffic school was found to vary according to the type of driver treated. For females and certain male subgroups, there

California Traffic School cont.

was no evidence that traffic school resulted in driver improvement.

Cost effectiveness figures showed that the traffic school resulted in savings of $3,807 per 100 male drivers, which is substantially less than that achieved by a one-session group educational meeting given by the Department of Motor Vehicles. Therefore, lengthy traffic school courses should not be considered desirable alternatives to one-session group educational meetings, nor should they be implemented on a state-wide basis without further modifications to improve cost effectiveness. These modifications might include (1) shortening the length of the course, (2) modifying course content to improve those types of drivers who did not benefit from the course, and (3) focusing only on those drivers who benefitted from the course. The authors feel that a more systematic approach would be to utilize the more extensive court school programs for those drivers who continue to violate after having already received a warning letter and attended a group meeting. However, implementation of an integrated state driver improvement program will require greater coordination between DMV and the courts than has existed in the past.

## Research Abstract

Source:

Klein, David and Julian A. Walker. Causation, Culpability and Deterrence in Highway Crashes. Department of Transportation, Automobile Insurance and Compensation Study. July 1970.

Discussion:

The text summarizes the most recent literature in the field to assess how the various investigations might bear on the policy issues involved in the automobile insurance system. Chapter 6 is entitled "The Efficacy of Educational and Environmental Countermeasures." The following abstract is concerned with driver education for the new driver.

The authors view educational countermeasures as an alternative to the punitive approach. The first seek to change individual behavior, the later to punish the offender.

High School courses consisting of classroom education and behind-the-wheel training are widespread. A crucial issue is whether students who have successfully passed a driver education course have fewer or less severe crashes or fewer violations than those who have not. According to the authors, much of the research - which they find to be methodologically of poor quality - claims the course graduates do have better records. The insurance industry reinforces those claims.

The reviewers suggest that the relationship between driver education and subsequent performance is statistical association and that the driver education itself does not necessarily produce better records.

The research is criticized for using as subjects student groups already divided into those planning to take the course and those not so planning. Rather than the driver education course, it may be special characteristics of those who want to take the course which account for their subsequent records. Next, the research supporting driver education does not compare both the quality and the

Klein cont.

quantity of the exposure of the two groups. Perhaps the driver-educated group drives far less miles after the course. Thirdly, the follow-up period for comparisons is often short so that it is unclear how lasting the effect of the courses may be. Finally, each study is peculiar to the education program devised for the locale in which it is administered. To generalize from such studies may be inappropriate.

More rigorous studies, where the exposure factor was controlled, found that education courses per se do not produce lower crash or citation frequencies.

Conclusion:

The authors find "no acceptable research" which credits driver education with a significant role in the reduction of violations or accidents.

## Research Abstract

Source:

State of California, Department of Motor Vehicles "An Abstract of Modifying Negligent Behavior: Evaluation of Selected Driver Improvement Techniques," March 1971.

Discussion:

In California, as elsewhere, each year large amounts of money and manpower are expended on programs aimed at the negligent driver - the driver who is habitually involved in collisions and convictions. This study evaluated the effectiveness of various driver improvement programs, including:

Warning Letter - Each subject in this group was sent a standard warning letter which was then being used as part of the regular driver improvement program.

Group Meeting - Each subject was scheduled for and sent an "invitation" to attend a group treatment session (only about 50 percent actually attended). All group sessions were conducted by eight special driver improvement trainers.

Individual Hearing - Each subject was scheduled for an informal hearing and sent a notice to appear. If he did attend the hearing (and over 80 percent did) the department's regular procedures were used to determine what action was taken. If the subject was found negligent, recommendations were made regarding the subject's license; the options ranged from a warning to revocation.

Data on each subject's driving record was coded for the three-year period prior to and for one year after his selection; this information, together with some estimates for the cost of collisions and programs, is the basis for comparison of the various programs.

Conclusions and Recommendations:

As a first contact for negligent drivers, the group meetings are successful in reducing the collision rate for both men and women. While the group meetings resulted in only a small reduction of collisions for men, it is the only pro-

California cont.

gram studied which was at all promising for male drivers. For women there were several programs which resulted in lower collision rates, one of which is the group meeting; the others include the individual hearings (most effective) and warning letters.

A follow up hearing is useful for those male drivers who continue to accumulate convictions and collisions after their initial program (group meeting, warning letter, etc.). Such a follow-up hearing results in further collision reduction. This was interpreted as support for DMV's practice of progressing from mild to more severe actions when a driver continues to be involved in collisions and traffic convictions.

Cost/benefit results indicate that the best program combination from a collision reducing standpoint (group meetings for males and individual hearings for females) would produce a net savings to the people of California of over 3.7 million dollars a year. Using the group meetings for both sexes produces a slightly smaller net savings of about 3.4 million dollars.

## Presentation

## "More Than A Minute"

### Purpose and Description

This presentation is intended to re-emphasize major aspects of the previous small group discussions and total group meeting. It reviews research in highway safety and leads participants toward a consideration of the advantages of a reduction in the court case load. It explores the implications of concentrating court resources on the problem driver. Finally, some possible models for the achievement of a reduced case load are described. At the conclusion of the presentation, participants are encouraged to discuss the suggestions made and their practical application

In addition to presenting a good deal of information about research and experiments relating to a reduced court case load, this workshop session should prepare participants for succeeding workshop topics on the evaluation of countermeasures and coordination of the highway safety system.

## Notes to Trainers

Presentation: The presentation itself may be given by the chairman, a trainer or a guest speaker. While modifications in the presentation to conform to the speaker's individual speaking style are encouraged, it is important that the major facts included are presented. These facts (research studies and experiments) respond to the previous group discussions and contribute to the development of the total workshop design and purpose.

Presentation Discussion: Time should be allowed for participants to discuss the presentation and its conclusions. Where possible, this discussion should be directed by the trainers toward the implications of the facts presented on the particular regional or local situation of the participants. General questions as to the research cited should be clarified from the body of the speech itself, or by reference to the abstracts and bibliography in the manual. If questions arise as to the results of the New York system described in the presentation, trainers may wish to refer to the following evaluation summary.

The effectiveness of the New York system was investigated by Arthur Young and Company in December, 1972, as a portion of a study on the effects of decriminalizing certain violations. The study found that:

1. simplified adjudication procedures have been developed which appear more comprehensible to the public; less wasteful of the resources of the criminal justice system; and more individualized than "assembly line due process".
2. improved case clearance rates and reduction in the elapsed "time-to-disposition" had been accomplished.
3. the procedures were supported by police personnel because officer "court time" had been reduced by an estimated 50%.
4. there was less willingness of hearing officers to be involved in "plea-bargaining" since referees did not feel the pressure to reduce a charge to avoid a lengthy trial.

5. motorists interviewed were usually favorably disposed toward the informality, fairness and convenience, although they did not differentiate between the authority of the hearing officer and that of the judge.

6. a review of violation and accident statistics did not indicate any real change in those rates.

## "MORE THAN A MINUTE"

THE GROUP PRESENTATIONS AND DISCUSSIONS WE HAVE JUST COMPLETED HAVE CLARIFIED TO SOME EXTENT OUR UNDERSTANDING OF THE PROBLEM OF HIGHWAY SAFETY. PERHAPS IT HAS PLACED THIS PROBLEM IN A NEW PERSPECTIVE. WE HAVE SEEN THAT VIOLATIONS AND CRASHES DO NOT INVOLVE ONLY A LIMITED NUMBER OF BAD OR "ACCIDENT-PRONE" DRIVERS, RATHER THEY INVOLVE THE NORMAL OR AVERAGE DRIVER WHO OFTEN COMMITS ERRORS AND WHO OFTEN FINDS THAT THE DEMANDS OF THE ROAD EXCEED HIS CAPABILITIES. WE HAVE SUGGESTED THAT REMOVING THE HABITUAL VIOLATOR FROM THE ROAD WILL NOT GREATLY REDUCE OUR HIGHWAY SAFETY PROBLEM. WE HAVE CONSIDERED RESEARCH THAT INDICATES THAT THE PROBLEM DRINKER MAY FALL INTO SEVERAL CATEGORIES - THE EXCESSIVE DRINKER, THE YOUNG AND INEXPERIENCED, AND THE ELDERLY. THESE FINDINGS SUGGEST A NEED FOR REEXAMINATION OF OUR PRESENT COURT PRACTICES AND THE USE OF OUR RESOURCES.

IN THE REEXAMINATION - IN LIGHT OF OUR DISCUSSION EARLIER TODAY - WE MUST NOT FORGET THAT REGARDLESS OF SCIENTIFIC STUDIES OR NEW THEORIES, YOU REMAIN WITH THE DIFFICULT TASK OF FINAL DECISION-MAKING WHEN A TRAFFIC OFFENDER APPEARS IN YOUR COURT. YOU ARE PLACED IN A POSITION OF COMPLEX RESPONSIBILITIES - A POSITION OF MULTIPLE DEMANDS:

1) TO INCREASE RESPECT FOR THE COURTS AND THE ADMINISTRATION OF JUSTICE;

2) TO SELECT SANCTIONS APPROPRIATE TO INDIVIDUAL TRAFFIC LAW OFFENDERS - PARTICULARLY SANCTIONS INVOLVING CORRECTION AND REHABILITATION WHERE PUNISHMENT IS INAPPROPRIATE; AND

3) TO REDUCE THE INCIDENCE OF TRAFFIC VIOLATIONS AND THE INCIDENCE OF ACCIDENTS RESULTING FROM THOSE VIOLATIONS.[1]

GIVEN THESE DEMANDS, YOURS IS A POSITION OF CONTINUING FRUSTRATION. FOR, AS YOU STRIVE TO FULFILL THESE VARIED RESPONSIBILITIES, YOU CAN NOT HELP BUT NOTE THAT THE HIGHWAY STATISTICS - DEATHS, PROPERTY DAMAGE, INJURIES AND VIOLATIONS - CONSTANTLY INCREASE. WITH THIS IN MIND, LET US REEXAMINE THE DEMANDS MADE UPON SUCH CONFLICT. AND LET US THEN DISCUSS WHAT APPROACHES MIGHT BE TAKEN IN MEETING THESE DEMANDS AND FULFILLING RESPONSIBILITIES.

FIRST, WE HAVE SAID THAT SOCIETY DEMANDS THAT THE TRAFFIC COURT JUDGE INCREASE RESPECT FOR THE COURTS AND THE ADMINISTRATION OF JUSTICE. THE TRAFFIC OFFENDER - WHETHER OR NOT HIS ACTIONS RESULTED IN A CRASH - HAS HISTORICALLY BEEN PLACED WITHIN THE JURISDICTION OF THE CRIMINAL LAW. IN DOING SO, SOCIETY HAS MADE THE JUDGEMENT THAT EACH INDIVIDUAL OFFENDER - AS WITH ANY OTHER CRIMINAL DEFENDANT - SHOULD COME BEFORE THE COURT FOR THE DETERMINATION OF GUILT OR INNOCENCE AND THE CHOICE OF A SANCTION. IN THIS APPEARANCE, HE MUST BE GIVEN THE FULL RANGE OF DUE PROCESS.

IN COMING BEFORE THE COURT, THE INDIVIDUAL EXPECTS A FAIR AND JUST TREATMENT. AS STATED BY JUDGES BERG AND SAMUELS OF THE CHICAGO MUNICIPAL COURT:

> FOR MORE THAN NINETY PER CENT OF THE AMERICANS WHO COME INTO CONTACT WITH THE COURTS, THEIR APPEARANCE IN TRAFFIC COURT IS THE ONLY OCCASION THEY WILL HAVE TO PERSONALLY OBSERVE THE ADMINISTRATION OF JUSTICE...THE WELL-DEMONSTRATED TRUTH OF THE MATTER IS THAT WHAT HAPPENS TO THE CITIZEN IN THE TRAFFIC (COURT) CAN AND WILL INFLUENCE HIS ATTITUDE TOWARD LAW ENFORCEMENT, TOWARD THE ENTIRE JUDICIAL SYSTEM, AND TOWARD THE ENTIRE SYSTEM OF LAWS AND JUSTICE...THE INCREASE IN RESPECT FOR TRAFFIC LAWS CREATES (AS) AN INEVITABLE BY-PRODUCT, RESPECT FOR ALL LAWS AND THE ADMINISTRATION OF JUSTICE. AT THE SAME TIME, THIS INCREASE IN RESPECT FOR THE TRAFFIC LAWS CARRIES WITH IT THE PROMOTION OF TRAFFIC SAFETY THROUGH GREATER VOLUNTARY COMPLIANCE WITH THE RULES OF THE ROAD.[2]

CONVERSELY, A POOR EXPERIENCE IN COURT CAN REDUCE RESPECT FOR THE LAW AND THE ADMINISTRATION OF JUSTICE. IN A CROWDED, URBAN LOWER CRIMINAL COURT IN CONNECTICUT, RESEARCHERS FOUND THAT 72% OF ALL CRIMINAL CASES ARE HANDLED IN ONE MINUTE OR LESS.[3] SUCH AN APPEARANCE CAN NOT BE CALCULATED TO GENERATE RESPECT FOR THE JUDICIAL SYSTEM UNDER ANY CONCEIVABLE CIRCUMSTANCES. OBVIOUSLY, THIS SITUATION DOES NOT EXIST IN ALL OUR COURTS AND IT MAY NOT

APPLY TO ANY OF THE COURTS REPRESENTED HERE. BUT FOR THE MOMENT, LET US ASSUME THAT SUCH A REPORT DID EXIST - A COURT WITH EXTREMELY OVERCROWDED CONDITIONS - AND THAT WE HAVE BEEN ASKED TO RECOMMEND APPROACHES AND SOLUTIONS TO ITS PROBLEMS.

FIRST, LET US CONSIDER THE TIME AND EFFORT EXPENDED IN THE COURT APPEARANCES OF A LARGE NUMBER OF DRIVERS - THE AVERAGE DRIVERS - WHO MIGHT BE DEALT WITH BY ANY OTHER MEANS.

FROM THE STUDIES REPORTED TODAY, IT SEEMS THAT THE SO-CALLED "ACCIDENT-PRONE DRIVERS" OR "HABITUAL OFFENDERS" DO NOT ACCOUNT FOR MOST ACCIDENTS. A LARGE NUMBER OF CONVICTIONS IN HIS PAST RECORD DOES NOT NECESSARILY INDICATE THAT ANY INDIVIDUAL WILL BE INVOLVED IN FUTURE ACCIDENTS. IT IS THE NORMAL, OR AVERAGE, DRIVER WHO IS INVOLVED IN MOST ACCIDENTS.

AS EARLY AS 1939, T. W. FORBES, A MEMBER OF THE YALE UNIVERSITY BUREAU FOR STREET TRAFFIC RESEARCH, CONCLUDED THAT:

> THE 'NORMAL' DRIVER CONSTITUTED 98.7 PERCENT OF THE DRIVER GROUP STUDIED AND CAUSED 96.3 PERCENT OF THE ACCIDENTS WHICH INTERFERED WITH THE EFFICIENCY OF TRAFFIC IN THAT (CONNECTICUT) STATE.[4]

IN 1971, B.J. CAMPBELL, OF THE UNIVERSITY OF NORTH CAROLINA HIGHWAY SAFETY RESEARCH CENTER, CAME TO ESSENTIALLY THE SAME CONCLUSION. NORMAL DRIVERS, THOSE WITH NO RECORD OF TRAFFIC

VIOLATIONS IN THE PRECEDING TWO YEARS, ARE INVOLVED IN MOST HIGHWAY CRASHES. IN WORDS ECHOING THOSE OF 32 YEARS BEFORE, HE SAID:

> IF YOU TOOK ALL DRIVERS WITH THREE OR MORE VIOLATIONS IN THE PAST TWO YEARS OFF THE HIGHWAY AND KEPT THEM OFF 100 PERCENT EFFECTIVELY FOR THE WHOLE (NEXT) TWO YEARS, NORTH CAROLINA WOULD STILL EXPERIENCE 96.2 PERCENT OF THE ACCIDENTS IT WOULD HAVE HAD ANYWAY.[5]

THE NORTH CAROLINA REPORT, AS ONE OF YOUR OWN GROUPS REPORTED EARLIER, DID FIND AN EXCEPTION - THE ABUSIVE DRINKER WHO DRIVES. DRIVERS WITH A HISTORY OF DRUNKEN DRIVING ARE MORE LIKELY TO BE INVOLVED IN FUTURE ACCIDENTS THAT THE AVERAGE DRIVER.

IF IT IS THE NORMAL DRIVER WHO IS INVOLVED IN MOST ACCIDENTS, AND IF THE OVERWHELMING MAJORITY OF PEOPLE WHO HAVE AN ACCIDENT IN ONE TIME PERIOD DO NOT HAVE AN ACCIDENT IN THE NEXT TIME PERIOD, ONE MUST ASK IF IT IS SENSIBLE TO DEVOTE EQUAL COURT RESOURCES TO EVERY VIOLATOR. A RELATED QUESTION FOLLOWS - SHOULD THE COURT CONCENTRATE ITS RESOURCES ON CERTAIN TYPES OF OFFENDERS?

TWO PROFESSORS OF LAW ADDRESSED THEMSELVES TO THESE QUESTIONS IN A RECENT STUDY. GENERALLY, IT IS ASSUMED THAT REQUIRING THE OFFENDER TO APPEAR IN COURT IS A HIGHLY EFFECTIVE MEANS OF INFLUENCING HIS FUTURE DRIVING BEHAVIOR. HOWEVER, RESEARCH INDICATES QUITE A

DIFFERENT CONCLUSION - THAT A REQUIRED COURT APPEARANCE MAY NOT EFFECT SUBSEQUENT DRIVING RECORDS ANY MORE THAN PAYING A STANDARD FINE BY MAIL, RECEIVING A WARNING TICKET, OR THE OPPORTUNITY TO CHOOSE BETWEEN A COURT APPEARANCE AND THE PAYMENT OF A FINE TO A BUREAU. IN THEIR STUDY PUBLISHED IN FEBRUARY, 1973, THE TWO PROFESSORS OF LAW CONCLUDED:

> WE COULD FIND NO CLEAR ADVANTAGE IN SUBSEQUENT SAFETY RECORDS OF DRIVERS REQUIRED TO APPEAR IN COURT...COMPARED WITH THOSE PROCESSED BY THE TYPICAL VIOLATIONS BUREAU SYSTEM PREVAILING IN DENVER OR WITH THE ALTERNATIVES - THE MAILED FINE AND THE WARNING - INTRODUCED TEMPORARILY INTO DENVER BY THIS STUDY.[6]

GIVEN THESE FINDINGS, IT DOES NOT SEEM REASONABLE TO EXPEND THE SAME AMOUNT OF JUDICIAL RESOURCE ON EVERY VIOLATOR, FOR WE KNOW THAT SOME VIOLATORS PRESENT MORE RISK THAN OTHERS AND THAT IN MOST CASES APPEARANCE OR NON-APPEARANCE DOES NOT AFFECT SUBSEQUENT DRIVING BEHAVIOR.

WHERE THEN, SHOULD THE COURT CONCENTRATE ITS RESOURCES? OBVIOUSLY, UPON THE PROBLEM DRIVER - THOSE WE HAVE IDENTIFIED AS REQUIRING SPECIAL ATTENTION. THE CONCENTRATION OF TIME AND EFFORT UPON THESE DRIVERS WILL ALLOW THE COURT TO RELIEVE ITS OVERBURDENED DOCKET AND DEVOTE MORE TIME TO THE INDIVIDUAL OFFENDER.

BY ALLOTTING MORE TIME AND EFFORT TO THE DRIVERS THAT DO APPEAR IN COURT, THE JUDICIARY CAN BETTER MEET EACH DEMAND MADE UPON IT BY SOCIETY - TO INCREASE RESPECT FOR THE COURTS AND THE ADMINISTRATION OF JUSTICE; TO SELECT INDIVIDUALIZED REHABILITATIVE SANCTIONS; AND TO EFFECT ACCIDENT REDUCTION. FOR THE MOMENT, LET US CONSIDER THE PRACTICAL ISSUES RAISED BY REDUCING THE COURT CASE LOAD TO ALLOW FOR THIS CONCENTRATION OF RESOURCES. AT A LATER TIME WE WILL DISCUSS HOW THIS CONCENTRATION OF COURT TIME AND RESOURCES UPON CERTAIN OFFENDERS WILL RESPOND TO SOCIETY'S DEMAND FOR A REDUCED INCIDENCE OF TRAFFIC VIOLATIONS AND RESULTING REDUCTION IN ACCIDENTS.

THE PRIMARY QUESTION NOW IS THE EVER-PRESENT "HOW?". HOW MIGHT THIS REDUCTION OF THE COURT CASE LOAD BE ACCOMPLISHED? THERE ARE MODELS FOR THIS PROCESS WHICH MAY BE MODIFIED TO MATCH THE NEEDS OF ANY JURISDICTION AND TO RESPOND TO THE SUGGESTIONS CURRENTLY UNDER DISCUSSION ON A NATIONAL BASIS.

THE CHANGES REQUIRED TO REDUCE AN OVERLOADED DOCKET NEED NOT BE RADICAL. A WIDE RANGE OF EXAMPLES EXISTS WHICH WOULD ENABLE THE JUDGE TO SELECT CASES FOR HIS ADJUDICATION. HE COULD ALLOCATE RESPONSIBILITY TO REFEREES TO HEAR CERTAIN CASES WITH THE UNDERSTANDING THAT THEIR DECISIONS WOULD BE SUBJECT TO HIS REVIEW. HE COULD DETERMINE GUIDELINES FOR CLERKS TO USE IN ASSESSING FINES. HE COULD ESTABLISH A TRAFFIC VIOLATIONS BUREAU THAT WOULD DEAL WITH CERTAIN TYPES OF MINOR OFFENSES. IF SUCH A BUREAU ALREADY

EXISTED, HE COULD EXTEND ITS AUTHORITY TO HANDLE A WIDER RANGE OF OFFENSES. IN ALL THESE EXAMPLES THE JUDGE MAINTAINS CONTROL OF THE SELECTION OF WHICH TYPES OF CASES REQUIRE HIS SPECIAL ATTENTION.

ANOTHER ALTERNATIVE MODEL WAS PUT INTO EFFECT ON JULY 1, 1970, IN NEW YORK STATE. ALL MINOR TRAFFIC CASES OCCURRING IN NEW YORK CITY, THAT IS, VIOLATIONS OTHER THAN MISDEMEANORS SUCH AS DRIVING WHILE INTOXICATED OR RECKLESS DRIVING, ARE HEARD BY TRAFFIC BUREAUS. THE SYSTEM ANNUALLY REMOVES NEARLY 1,000,000 TRAFFIC SUMMONSES ISSUED FOR MOVING VIOLATIONS IN NEW YORK CITY FROM THE CRIMINAL COURTS, LEAVING THE JUDICIARY WITH THE TIME AND CAPABILITY TO HEAR MAJOR VIOLATION CHARGES.

THIS MODEL USES THE LATEST COMPUTER-BASED INFORMATION SYSTEMS. IF AN OFFENDER DOES NOT WISH TO CONTEST HIS CASE, HE MAY PLEAD GUILTY BY MAIL OR IN PERSON, OR EVEN PLEAD GUILTY BUT MAKE AN EXPLANATION OF THE SURROUNDING CIRCUMSTANCES. WITH SUCH A PLEA, A FIXED FINE IS PAID. THIS PROCESS HAS BEEN LIMITED TO MINOR OFFENSES BY INDIVIDUALS WITH A GOOD DRIVING RECORD. MORE SERIOUS OFFENSES OR THOSE IN WHICH THERE IS A POSSIBILITY OF A LICENSE SUSPENSION REQUIRE A PERSONAL APPEARANCE.

NINETY-THREE PERCENT OF THE CASES HAVE BEEN FOUND TO USE THE AUTOMATIC FINE. SEVEN PERCENT ENTER A PLEA OF NOT GUILTY AND IN EACH CASE A HEARING IS SCHEDULED BY A CENTRAL COMPUTER TO REDUCE DEMANDS

ON OFFICER TIME. AT THE TIME OF THE HEARING, THE HEARING OFFICER HAS AVAILABLE A PRINT-OUT OF THE DRIVER'S RECORD. IF A DRIVER DOES NOT APPEAR AFTER ONE WARNING, THE COMPUTER SYSTEM PLACES AN AUTOMATIC BLOCK AGAINST THE DRIVER'S LICENSE WHICH PREVENTS ITS RENEWAL. THE HEARING OFFICER CAN IMPOSE THE SANCTION WITHOUT DELAY. FOR EXAMPLE, THE HEARING OFFICER CAN IMMEDIATELY SUSPEND A LICENSE BY USE OF A COMPUTER RELAYED MESSAGE TO THE DEPARTMENT OF MOTOR VEHICLES.[7]

THERE CAN BE NO QUESTION OF THE POWER OF LEGISLATIVE BODIES TO DECRIMINALIZE THOSE ACTS WHICH WERE EARLIER PLACED IN THE CATEGORIES OF CRIMES; AS NEW YORK HAS DONE. AT PRESENT, NEW HAMPSHIRE, MINNESOTA, NEW YORK, WISCONSIN AND PENNSYLVANIA HAVE LAWS IN EFFECT WHICH MAKE MOST MOVING VIOLATIONS "LESS THAN A FULLY CRIMINAL ACT." NEW JERSEY AND CALIFORNIA HAVE MODIFICATIONS OF DECRIMINALIZATION LEGISLATION. MANY STATES AND LOCAL AREASCHARACTERIZE THE TRAFFIC VIOLATIONS AS ONLY "QUASI" CRIMINAL, THUS AIDING THE COURTS TO DEVELOP SYSTEMS TO DIVERTROUTINE CASES.

RECOGNIZING THE PROBLEMS OF THE TRAFFIC COURT, THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION OF THE DEPARTMENT OF TRANSPORTATION HAS PROPOSED A REVISION OF STANDARD NO. 7, TRAFFIC COURTS, PROMULGATED UNDER THE HIGHWAY SAFETY ACT OF 1966. THE PROPOSAL FOCUSES ON THE COORDINATION OF TRAFFIC OFFENSE ADJUDICATION IN THE FORM OF ADMINISTRATIVE STAFF; USE OF ADVANCED CASE MANAGEMENT TECHNIQUES

FOR TIMELY REPORTING; AND PROCESSING OF CERTAIN TRAFFIC OFFENSES AS NON-CRIMINAL VIOLATIONS. THESE PROPOSED STANDARDS ARE INDICATIVE OF A GROWING CONCERN FOR THE MORE EFFECTIVE AND EFFICIENT OPERATION OF OUR TRAFFIC COURTS.

REGARDLESS OF YOUR OPINION OF THE MODELS JUST PRESENTED, YOU WILL AGREE THAT, AS JUDGES, YOU ARE ASKED TO DO AN OFTEN IMPOSSIBLE TASK. SO LONG AS EACH VIOLATOR IS REQUIRED TO APPEAR BEFORE THE COURT, SOME JUDGES WILL BE FORCED TO DEAL WITH UNREASONABLE VOLUMES OF CASES, STRAINING THEIR TIME AND ENERGY, AND WILL BE UNABLE TO DEVOTE THEIR EFFORTS AND PROFESSIONAL EXPERTISE TO THE RELATIVELY FEW, BUT ALL IMPORTANT, CASES THAT WILL MAKE THE GREATEST IMPACT ON HIGHWAY SAFETY.

THIS IS NOT TO SAY THAT EACH OF YOU MUST PERFORM "RADICAL SURGERY" ON YOUR PRESENT COURT SYSTEMS. EACH COURT VARIES IN WORKLOAD BOTH IN NUMBER, AND TYPE OF, CASES. YOUR EXPERTISE WILL DICTATE THE MODEL BEST SUITED TO DIVERT CASES FROM YOUR COURTROOM DOCKET AND THE NUMBERS YOU MUST DIVERT TO ENAGLE YOU TO DEVOTE MAXIMUM RESOURCES TO THOSE AREAS WHERE YOUR JUDGMENTS WILL HAVE MAXIMUM POSITIVE EFFECT.

THE TIME HAS NOW COME WHEN YOUR EFFORTS, YOUR EXPERIENCE AND YOUR EXPERTISE MUST BE DIRECTED TOWARD THOSE SELECTED IDENTIFIABLE DRIVERS WHO WILL BENEFIT FROM THE JUDICIAL PROCESS. SUCH DIRECTION AND CONCENTRATION OF YOUR EFFORT WILL INEVITABLY INCREASE RESPECT FOR THE JUDICIARY AND WILL BECOME A CRITICAL ELEMENT IN THE SOLUTION OF OUR HIGHWAY SAFETY PROBLEM.

## Footnotes

1. Arthur Young and Company, "A Report of the Status and Potential Implications of Decriminalization of Moving Traffic Violations," Department of Transportation, National Highway Traffic Safety Administration, December 15, 1972, p. 123.

2. Raymond Berg and Richard Samuels, "Improving the Administration of Justice in Traffic Court," *De Paul Law Review* Vol. 19, p. 503, 1970 cited in Institute for Research in Public Safety, *Highway Safety Research: Improved Disposition of Traffic Cases*, Reference Volume I, Indiana University, September 1, 1972.

3. Maureen Mileski, "Courtroom Encounters: An Observation Study of a Lower Criminal Court," *Law and Society Review* May 1971, p. 479.

4. T. W. Forbes, "The Normal Driver as a Traffic Problem," *Journal of General Psychology* Vol. 29, p. 471, 1939 cited in Automobile Insurance and Compensation Study, *Driver Behavior and Accident Involvement: Implications for Tort Liability*, Department of Transportation, October 1970.

5. Insurance Institute for Highway Safety, "North Carolina Study Finds 'Repeater Theory Weak'," *Status Report* Vol. 6, No. 13, July 12, 1971.

6. Murray Blumenthal and H. Laurence Ross, *Two Experimental Studies of Traffic Law, Volume II: The Effect of Court Appearance on Traffic Law Violators, Final Report*, Department of Transportation, National Highway Traffic Safety Administration, February 1973.

7. Institute for Research in Public Safety, Highway Safety Research: Improved Disposition of Traffic Cases, "Summary Volume," Indiana University, September 1, 1972, pp. 15-17.

## Film

## Ladies and Gentlemen of the Jury

## Purpose and Description

Purpose: One of the major premises of the workshop is that there are certain groups of violators who should receive special attention from the courts. Primary among these groups is the problem drinker driver. This film, and the discussion that follows, keynotes the problem of the abusive drinker and illustrates the need for more effective public education about the drinker-driver. It also provides a common "case study" as the basis for Exercise II which follows.

Description: A brief introduction to the film by the workshop chairman explains that it was intended for general public education and asks participants to overlook its technical imperfection. The film tells the story of a "typical" problem drinker driver, from arrest through trial. Most elements in the highway safety system are represented to some degree within the film and, indeed, their cooperation is presented in a somewhat idealized form. However, in spite of this cooperation, the driver on trial is not convicted, since the jury refuses to find him guilty. The implication is that most people misunderstand both the dangers of the problem drinker on the road and the differences between the problem drinker and the occasional light drinker. The film will be followed by a general critique of the film itself and a discussion of the problem it portrays. Participants will consider ways in which the film could be used in their own communities and will share ideas and information on other possible areas of public education available to them.

## Notes to Trainers

Instructions to Participants: The chairman or a trainer should read the introduction to this session to participants and clarify any questions before the film begins.

Post-Film Discussion: Allow participants to express their opinions of the film as a technical document but do not dwell upon this aspect of the critique. (Portions of it are over-dramatized, the judge's concluding speech is unlikely, but there are no gross inaccuracies.) If these opinions are not allowed expression, it will be difficult to direct discussion into more substantive areas.

Again your role is that of a facilitator, initiating and guiding discussions. Ask participants to discuss the degree to which the drinker-driver is a problem in their courts. How important is public education about this problem? Could this film be used for public education purposes in their communities? If so, by whom? What other resources does a judge have to increase public understanding of this problem?

At times you may also wish to remind participants of information and/or conclusions relating to the problem drinker driver mentioned during earlier workshop activities.

# INSTRUCTIONS TO PARTICIPANTS

EARLIER TODAY WE AGREED THAT THE COURT SHOULD GIVE SPECIAL ATTENTION TO THE PROBLEM DRIVER. PRIMARY AMONG THIS PROBLEM DRIVER CATEGORY IS THE ABUSIVE DRINKER. THE FILM WE ARE ABOUT TO SEE DEALS WITH SUCH A PROBLEM DRIVER AND TRACES THE HISTORY OF HIS CASE.

BEFORE YOU WATCH THIS FILM I MUST ADD A NOTE OF CAUTION. THE FILM WAS NOT PRODUCED AS A TRAINING DOCUMENT, NOR IS IT INTENDED TO BE TOTALLY REALISTIC IN A TECHNICAL OR LEGAL SENSE. RATHER IT WAS PRODUCED FOR VIEWING BY THE GENERAL PUBLIC TO ACQUAINT IT WITH THE PROBLEMS FACED ALMOST DAILY BY THE CRIMINAL JUSTICE SYSTEM IN DEALING WITH THE ABUSIVE DRINKER WHO DRIVES.

WHILE YOU ARE CERTAINLY FREE TO CRITIQUE THE FILM FROM A TECHNICAL STANDPOINT, OUR REAL FOCUS HERE SHOULD BE UPON THE PROBLEM IT REPRESENTS AND UPON THE NEED FOR PUBLIC EDUCATION ABOUT THE PROBLEM. COMMUNITY SUPPORT IS ESSENTIAL TO THE SUCCESS OF ANY PROGRAM DEALING WITH THE EXCESSIVE DRINKER-DRIVER. THIS FILM SHOULD PROVIDE A BASIS FOR DISCUSSION AND SUGGESTIONS AS TO WAYS BY WHICH SUCH SUPPORT MAY BE ACHIEVED.

## Exercise II

## Countermeasures
## Purpose and Description

Purpose: This exercise is a preparation for the second presentation, "Proven Effective", which discusses the necessity for continuing evaluation of the effectiveness of sanctions and countermeasures. It demonstrates the variety of sentencing which might be applied to a given case solution. Predictably, the selection of sanctions will vary between groups of participants and between individuals within groups. The choice of sanctions by most participants will largely depend upon their individual experience and personal preferences. The exercise thus illustrates the lack of objective criteria for the selection of sanctions and points to the need for evaluation of countermeasure effectiveness.

Description: Participants are instructed to imagine that they are the judge in the film Ladies and Gentlemen of the Jury, seen previously. They are asked to consider what sanction they would have employed in this case if the jury had returned a verdict of guilty. They are to assume that they might choose any countermeasures on the list provided. First individually and then in groups, participants are asked to decide what single countermeasures they believe to be most effective and what countermeasures they believe to be least effective. If time allows they may also decide what combination of countermeasures they might employ. Small groups attempt to reach consensus on these questions and later report their results in a general meeting.

# Notes to Trainers

Instructions to Participants: The chairman or a trainer should read the instructions to all participants at the beginning of this exercise. Trainers should review these instructions with the members of their small groups.

Small Group Tasks: Participants should be allowed time to read the provided list of countermeasures and to make their individual selections of the most and least effective countermeasures. Each member of the group should explain what countermeasures he believes to be most effective and why. Since this exercise is directed toward the statement of a variety of opinions on sanctions and countermeasures, trainers should not insist that the group reach consensus or report only a majority opinion. Minority opinions should be expressed in the small group discussions and in the report of the group representative to the general meeting.

General Session: The chairman or a trainer should ask each of the small groups to report the results of their discussions. Cross-group discussion should be encouraged and each group should be asked to explain the reasons for their particular choice of countermeasures. The chairman or a trainer should summarize the results of the group reports, pointing out the variety of different opinions and the lack of objective data supporting the effectiveness of various countermeasures.

# INSTRUCTIONS TO PARTICIPANTS

IN VIEWING THE FILM LADIES AND GENTLEMEN OF THE JURY I IMAGINE MANY OF YOU IDENTIFIED WITH THE JUDGE. PERHAPS YOU FELT A SIMILAR SENSE OF FRUSTRATION WHEN THE JURY DISCHARGED THE DEFENDANT.

DURING THE FOLLOWING WORKSHOP SESSION WE ARE AGAIN GOING TO ASK YOU TO MEET IN INDIVIDUAL WORKING GROUPS - THE SAME GROUPS IN WHICH YOU PARTICIPATED EARLIER. WITHIN YOUR GROUP WE WANT YOU TO IDENTIFY WITH THE JUDGE IN THE FILM TO AN EVEN GREATER DEGREE. IMAGINE, IF YOU WILL, THAT YOU ARE THE JUDGE IN THE FILM AND THE CASE HAS BEEN TRIED BEFORE YOUR COURT. HOWEVER, THE JURY HAS RETURNED A VERDICT OF GUILTY. IT IS TIME NOW TO IMPOSE SENTENCE.

SECONDLY, YOU WILL BE ASKED TO ASSUME THAT YOU HAVE CERTAIN OPTIONS AVAILABLE IN THE NATURE OF SANCTIONS OR COUNTERMEASURES. THESE OPTIONS WILL BE PROVIDED TO YOUR SMALL GROUP. WHICH ONE ALTERNATIVE WOULD YOU IMPOSE AND WHY? ALSO, WHICH WOULD YOU CONSIDER THE LEAST EFFECTIVE? IF THE GROUP CANNOT ARRIVE AT A CONSENSUS, FEEL FREE TO COME BACK INTO THE GENERAL SESSION WITH A MAJORITY AND A MINORITY REPORT FOR DISCUSSION.

FINALLY, WE WOULD LIKE EACH GROUP TO HAVE GREATER FLEXIBILITY IN ARRIVING AT A SENTENCE APPROPRIATE FOR THE GENTLEMEN IN THE FILM. WE WOULD ASK YOU TO ARRIVE AT A SENTENCE UPON THE ASSUMPTION THAT

ALL OF THE OPTIONS GIVEN YOU ARE AVAILABLE AND MAY BE USED SINGLY OR IN COMBINATION. WOULD THE AVAILABILITY OF COMBINED OPTIONS CHANGE YOUR SENTENCE? WHICH COMBINATION OR SERIES OF OPTIONS DO YOU CONSIDER MOST EFFECTIVE? LEAST EFFECTIVE?

THE PURPOSE OF THIS WORKSHOP IS NOT TO IMPOSE UPON THE GROUP ANY GIVEN SOLUTION. PLEASE FEEL FREE TO DISAGREE OR TO SUBMIT YOUR OPINION SEPARATELY OR IN A MINORITY REPORT WHEN WE MEET HERE AGAIN AFTER YOUR GROUP DISCUSSION.

## List of Countermeasures

The following countermeasures are the options available to you in imposing sentence on the offender in the film:

1. A fine which could range up to $1,000 at the judge's discretion.
2. Conventional probation supervised either by citizen volunteers or staff probation officers with the probation period also at the judge's discretion and ranging up to one year.
3. Conditional or rehabilitative probation in which all defendents found guilty, as a condition of probation, would participate in one of the following treatments or programs routinely used by the Probation Department and described in each case by the judge with a recommendation from the court's diagnostic clinic:
    a) A course on alcohol problems, given two evenings per week for three weeks at the State College, and sponsored by the State Health Department and other agencies.
    b) Outpatient treatment for alcoholism at a hospital clinic. Weekly counseling supplemented by prescribed drugs such as Antabuse is required for a basic period of six months.
    c) Inpatient treatment at a Mental Health Center for a minimum of one week, followed by outpatient treatment for the balance of the probationary period.
    d) An alcoholism treatment release program through the County Jail. Probation is supplemented by a 30-day jail sentence, during which therapy and Antabuse treatment are begun the first week and the remaining three weeks are spent in the jail's reentry center, with continued treatment.
4. Jail sentence up to one year.
5. Mandatory revocation of driving privileges.
6. Limited driving privilege, if a need to drive is indicated.

# PRESENTATION

## "PROVEN EFFECTIVE"

### Purpose and Description

This presentation follows the small group and total group discussions of the selection of countermeasures for a hypothetical case - that depicted in the film Ladies and Gentlemen of the Jury. It is assumed that these discussions will have illustrated the lack of agreement on the effectiveness of various countermeasures.

The presentation begins with the argument that this lack of agreement indicates a need for reliable evaluations of countermeasures and their effect on highway safety. Several major countermeasure evaluations are discussed, both in terms of process and results. Participants are urged to consider the need for evaluation in regard to their own jurisdictions and their role as judges. Suggestions are made as to resources available for funding and implementing evaluation efforts. It is hoped that this presentation will increase the participant's motivation to consider and promote evaluation efforts in highway safety. The presentation is followed by a general discussion of the recommendations made and how they might be applied to local situations.

## Notes to Trainers

Presentation: As with the first presentation, this speech may be made by the chairman, a trainer or a guest speaker. It also may be changed stylistically to meet the needs of the speaker. Where recent evaluations have been done within the region or state of participants, they should be added as additional data. However, the presentation should continue to be directed at the need for continued evaluation and the development of alternative countermeasures.

Presentation Discussion: The presentation itself should be followed by a question/answer or discussion session that encourages participants to relate the content of the speech to their own needs and localities. Trainers should ask participants to comment on evaluation results and on the need for such evaluation within their own jurisdictions. Resources available for such research should be discussed and recommendations made for the implementation of evaluation programs.

## "PROVEN EFFECTIVE"

IF YOU WERE A PHYSICIAN, I DOUBT THAT YOU WOULD ADMINISTER A MEDICINE UNDER ORDINARY CIRCUMSTANCES IF YOU DID NOT KNOW IT WAS EFFECTIVE AND IF YOU FEARED IT MIGHT HAVE HARMFUL SIDE EFFECTS.

YET, JUST NOW, YOU HAVE COMPLETED AN EXERCISE IN WHICH IT BECAME APPARENT THAT THERE WAS NO GENERAL AGREEMENT ON THE MOST EFFECTIVE COUNTERMEASURES TO BE USED IN A GIVEN SITUATION. IN MANY INSTANCES, WE HAVE LITTLE REAL DATA ON THE RESULTS OF PARTICULAR COUNTERMEASURES AND THEIR EFFECT ON HIGHWAY SAFETY. IT MUST BE ASSUMED, THEN, THAT THE DECISION AS TO WHICH SANCTION TO IMPOSE IS MADE ON THE BASIS OF PERSONAL EXPERIENCE AND PREFERENCE, RATHER THAN ON AN OBJECTIVE KNOWLEDGE OF THE INFLUENCE OF THE SANCTION ON THE TRAFFIC VIOLATION.

THE SO-CALLED PROFESSIONALS - THE RESEARCH AND EVALUATION EXPERTS - DO NOT ALWAYS DO BETTER. BUT THEY START FROM THE ASSUMPTION THAT THERE IS A NEED TO KNOW.

THEY ASK THE QUESTIONS:

IS THE MEASURE EFFECTIVE IN REDUCING THE POSSIBILITY OF FUTURE ACCIDENTS?

COULD ANOTHER MEASURE ACCOMPLISH THE SAME RESULT AT LESS COST?

HAS THE MEASURE CHOSEN EITHER POSITIVE OR NEGATIVE SIDE EFFECTS WHICH WERE NOT FORESEEN?

ONE SUCH AREA OF INVESTIGATION DEALS WITH COUNTERMEASURES FOR FIRST OFFENDERS CONVICTED OF DRIVING UNDER THE INFLUENCE OF INTOXICATING LIQUOR. WITH THE ASSUMPTION THAT WE ALL ACCEPT THE NEED TO INVESTIGATE - THROUGH WE MAY AND SHOULD QUESTION THE RESULTS, WE WOULD LIKE TO REPORT ON THIS STUDY AND SEVERAL OTHER EFFORTS. AT THE CONCLUSION OF THIS WORKSHOP, A LIST OF THE STUDIES CITED WILL BE PROVIDED FOR THOSE INTERESTED IN MORE DETAILED READING.

THROUGH THE SUPPORT AND INTEREST OF THE PRESIDING JUDGE OF THE DENVER COUNTY COURT, AMONG OTHERS, A STUDY WAS DESIGNED TO DETERMINE SCIENTIFICALLY THE EFFECTS OF A FINE VERSUS CONVENTIONAL VERSUS REHABILITATIVE PROBATION ON THE SUBSEQUENT DRIVING RECORDS OF DRIVERS FOUND GUILTY OF A FIRST OFFENSE OF DRIVING UNDER THE INFLUENCE OF ALCOHOL (DUI).[1] FOLLOWING A CONVICTION FOR DUI, THE DEFENDANT COULD BE ASSIGNED TO ONE OF THE FOLLOWING GROUPS:

- A FINE WHICH COULD RANGE UP TO $1,000 AT THE JUDGE'S DISCRETION. TYPICALLY, JUDGES WOULD IMPOSE A FINE OF ABOUT $125.
- CONVENTIONAL PROBATION SUPERVISED EITHER BY CITIZEN VOLUNTEERS OR STAFF PROBATION OFFICERS WITH THE PROBATION PERIOD ALSO AT THE JUDGE'S DISCRETION AND RANGING UP TO ONE YEAR. TYPICALLY, SIX MONTHS PROBATION WAS IMPOSED.

CONDITIONAL OR REHABILITATIVE PROBATION IN WHICH ALL DEFENDANTS FOUND GUILTY, AS A CONDITION OF PROBATION, WOULD PARTICIPATE IN ONE OF THE FOLLOWING TREATMENTS OR PROGRAMS ROUTINELY USED BY THE PROBATION DEPARTMENT AND PRESCRIBED IN EACH CASE BY THE JUDGE WITH A RECOMMENDATION FROM THE COURT'S DIAGNOSTIC CLINIC:

- A COURSE ON ALCOHOL PROBLEMS, GIVEN TWO EVENINGS PER WEEK FOR THREE WEEKS AT METROPOLITAN STATE COLLEGE, AND SPONSORED BY THE STATE HEALTH DEPARTMENT AND OTHER AGENCIES. IN ORDINARY PRACTICE, THIS IS THE SECOND MOST FREQUENTLY USED PROGRAM IN CONDITIONAL PROBATION.
- OUT-PATIENT TREATMENT FOR ALCOHOLISM AT DENVER GENERAL HOSPITAL. IN ORDINARY PRACTICE, THIS IS THE MOST COMMONLY USED THERAPY IN CONDITIONAL PROBATION.
- INPATIENT TREATMENT AT FORT LOGAN MENTAL HEALTH CENTER FOR A MINIMUM OF ONE WEEK, FOLLOWED BY OUTPATIENT TREATMENT FOR THE BALANCE OF THE PROBATIONARY PERIOD. THIS TREATMENT IS INFREQUENTLY USED.
- AN ALCOHOLISM TREATMENT RELEASE PROGRAM THOUGH THE DENVER COUNTY JAIL. THIS IS AN EXTREME PROBATIONARY TREATMENT AND IS RARELY USED FOR THE FIRST OFFENDERS.

As you will note - these are the countermeasures (or sanctions) you were asked to rate.

Judges were asked to assign all subjects convicted in a given month to the same treatment group. For example, anyone convicted in January, 1969, was to be fined; February, 1969, given conventional probation; and March, 1969, given what has been broadly described as rehabilitative probation. The month-by-month rotation went from January 1969 through March 1970. Lest you fear that a researcher was not the adjudicator, the experimenters stipulated that judges would be free to vary the quantity of the prescribed penalty to fit the individual case, and that in exceptional cases, some other penalty, such as jail could be used.

The researchers found that judges were not following the agreed schedule of countermeasures - and a study of the different degrees of effect of the sanctions would be impossible as originally planned. Instead, statistical controls - basically re-groupings and control for certain characteristics - were used. All groups' records were reviewed for one year after conviction.

The startling results were, to quote the study:

> In neither the original treatment groups nor the groups created by the judges' actual sentences were there found any significant differences in subsequent crashes, moving violations (not associated with crashes), points, DUI convictions, or time to first subsequent crash or moving violation. Those drivers sentenced to jail rather than

> TO ONE OF THE PRESCRIBED TREATMENTS WERE ALSO FOUND NOT TO DIFFER FROM THE BALANCE OF THE GROUP IN SUBSEQUENT RECORDS.[2]

THE EXPERIMENTERS CONCLUDED THAT THERE WAS NO EVIDENCE UNDER THE CONDITIONS OF THEIR STUDY THAT ANY OF THE DIFFERENT SANCTIONS STUDIED WERE FOUND TO PRODUCE SUPERIOR RESULTS IN TERMS OF SUBSEQUENT DRIVER RECORD AND THUS THERE WAS NO CLEAR REASON FOR SELECTING ONE SANCTION OVER ANOTHER.

A CLEAR FINDING WAS THAT IF AN OFFENDER WAS REPRESENTED BY A LAWYER, THE JUDGE WAS MORE LIKELY TO DEVIATE FROM THE SCHEDULED PENALTY BY GIVING A FINE TO A REPRESENTED CLIENT. REPRESENTED DEFENDANTS COULD EXPERT FAR MORE FAVORABLE DISPOSITIONS OF THEIR CASES:

> THE LIKELIHOOD OF HAVING THEIR CHARGES REDUCED WAS 22 TIMES GREATER THAN FOR UNREPRESENTED DEFENDENTS, AND THE LIKELIHOOD OF BEING FOUND NOT GUILTY OR OF HAVING CHARGES DISMISSED WAS ALMOST FOUR TIMES THAT OF UNREPRESENTED DEFENDANTS.[3]

THE RESEARCHERS CONCLUDE:

> WITHOUT FURTHER EVIDENCE, OR WITHOUT PROVIDING FOR SCIENTIFIC PROGRAM EVALUATION, IT MAY BE NEEDLESSLY WASEFUL FOR COURTS TO DEVELOP REHABILITATIVE PROGRAMS INVOLVING PROBATION, COURSES IN ALCOHOL PROBLEMS, OUTPATIENT TREATMENT, ETC. CONSIDERING COSTS IN RELATION TO DEMONSTRATED BENEFITS, A COURT WOULD DO BEST TO APPLY THE SIMPLE, REVENUE GENERATING FINE WHICH IS UNCOMPLICATED TO ADMINISTER AND IS THE MOST POPULAR SANCTION AMONG DEFENDANTS AND LAWYERS. WE DO NOT SEE THE USE OF THE

FINE AS AN ULTIMATE ANSWER, BUT A STOP-GAP UNTIL RESEARCH SUPPORTS THE ADOPTION OF MORE EFFECTIVE ALTERNATIVES.[4]

THE AUTHORS DO NOT SUGGEST THAT JUDGES LIVE IN A WORLD WHERE NOTHING IS EFFECTIVE OR THAT IT MAKES LITTLE DIFFERENCE WHAT WE DO. THE REPORT ENDS WITH SPECIFIC RECOMMENDATIONS FOR FURTHER EVALUATION THAT WILL LEAD TO A SELECTION OF THE MOST EFFECTIVE COUNTERMEASURE.

A DIFFERENT APPROACH IN RESEARCH DESIGN FOR EVALUATION OF COUNTERMEASURES WAS FOLLOWED IN NORTH CAROLINA.[5] RATHER THAN ATTEMPT TO EVALUATE AN ENTIRE SYSTEM OF SANCTIONS APPLIED TO PERSONS CONVICTED OF A FIRST OFFENSE OF DUI AS IN THE DENVER STUDY, THE HIGHWAY SAFETY RESEARCH CENTER OF THE UNIVERSITY OF NORTH CAROLINA TRIED TO EVALUATE THE EFFECTIVENESS OF ONE SPECIFIC 1969 CHANGE IN NORTH CAROLINA LAW - AN OPTION TO THE JUDGE OF GRANTING SOME OF THOSE CONVICTED A LIMITED DRIVING PRIVILEGE, WHENEVER A NEED TO DRIVE IS INDICATED, IN LIEU OF THE MANDATORY REVOCATION OF THEIR LICENSE.

BEFORE DISCUSSING THE RESULTS OF THE EVALUATION STUDY, IT MIGHT BE INTERESTING TO NOTE THAT ONE OF THE REASONS FOR THE CHANGE IN THE LAW MAY HAVE BEEN AN EARLIER EVALUATION STUDY OF THE EFFECTIVENESS OF LICENSE SUSPENSION AND REVOCATION. IN 1965, TWO RESEARCHERS IN CALIFORNIA - COPPIN AND VAN OLDENBEEK - FOUND EVIDENCE THAT 33 PERCENT OF A GROUP WHOSE LICENSES HAD BEEN SUSPENDED AND 68 PERCENT WHOSE LICENSE HAD BEEN REVOKED CONTINUED TO DRIVE WITH SUFFICIENT FREQUENCY TO INCUR A SUBSEQUENT VIOLATION OR HAVE AN ACCIDENT.[6]

GIVEN THE FACT THAT AUTHORITIES ARE RELUCTANT TO IMPOSE MANDATORY LICENSE REVOCATION BECAUSE OF THE SEVERITY OF THE PENALTY; GIVEN THE FACT AS SHOWN BY COPPIN AND VAN OLDENBEEK, THAT ONCE IMPOSED IT MAY BE IGNORED; AND GIVEN THE REAL - AND ALARMING FACT - AS REPORTED TODAY - THAT SUCH DRINKING DRIVERS ARE INVOLVED IN NUMEROUS ACCIDENTS, THE NORTH CAROLINA LEGISLATURE ALLOWED UPON A FIRST CONVICTION,

> A LIMITED DRIVING PRIVILEGE OR LICENSE TO THE PERSON CONVICTED FOR PROPER PURPOSES REASONABLY CONNECTED WITH THE HEALTH, EDUCATION AND WELFARE OF THE PERSON CONVICTED AND HIS FAMILY.

THE DRIVER IS ISSUED A LICENSE WITH A SPECIFIC CONDITION OF DAYS, HOURS, TYPES OF VEHICLE, ROUTES, GEOGRAPHICAL BOUNDARIES AND SPECIFIC PURPOSE.

THE NORTH CAROLINA DEPARTMENT OF MOTOR VEHICLES THEN ASKED TWO QUESTIONS:

1) HOW ARE THE COURTS' ADJUDICATING DUI CASES GIVEN THE PREVIOUS RELUCTANCE TO CONVICT FOR DUI AND THE PREVIOUS TENDENCY TO AMEND THE COMPLAINT TO A LESSER OFFENSE WITHOUT MANDATORY LICENSE REVOCATION?

2) HAS THE AMENDMENT AFFECTED THE SUBSEQUENT DRIVING RECORD OF THOSE ARRESTED FOR DUI AND GRANTED A LIMITED DRIVING PRIVILEGE?

THE RESEARCHERS REVIEWED THE RECORDS OF GROUPS CONVICTED BEFORE AND AFTER THE STATUTORY CHANGE AND THEN EXAMINED BOTH DISPOSITION OF THEIR CASES (GUILTY, AMENDED COMPLAINT TO A LESSER CHARGE, NOT GUILTY, DISMISSED) AND SUBSEQUENT DRIVER RECORDS. THE STUDY LOOKED AT DRIVER RECORDS ONE YEAR AFTER THE ORIGINAL DUI CITATION - THE SAME FOLLOW-UP PERIOD USED IN THE DENVER STUDY.

THE DATA SHOWED THAT AFTER THE AMENDED STATUTE, THERE WAS AN INCREASE IN PERCENTAGE OF DUI CONVICTIONS BY THE COURTS. THUS, THROUGH HARD EVIDENCE, THE LEGISLATURE, THE COURTS, AND THE DEPARTMENT OF MOTOR VEHICLES WERE ABLE TO SEE A TREND THEY HAD PREDICTED - A MEASUREABLE CHANGE IN THE LIKELIHOOD OF A COURT CONVICTION FOR DUI ONE JUDGES HAD THE OPTION OF THE LIMITED DRIVING PRIVILEGE.

IN ADDITION, THE STATUTORY CHANGE TO LIMITED DRIVING PRIVILEGES APPEARS TO HAVE A POSITIVE SIDE EFFECT. DRIVERS CONVICTED OF DUI COULD DRIVE LEGALLY WHEN IT WAS OF NECESSITY, RATHER THAN FLOUT THE LAW BY DRIVING UNDER SUSPENDED OR REVOKED LICENSES.

IN THE FOLLOWING YEAR THE GROUP THAT WAS GRANTED THE LIMITED LICENSES DID NOT HAVE MORE ACCIDENTS AND HAD EVEN FEWER VIOLATIONS THAN THE AVERAGE NORTH CAROLINA DRIVER. IF THERE IS MERIT IN ALLOWING PEOPLE TO DRIVE WHEN IT IS NECESSARY, THEN THE PROGRAM SEEMS TO BE SUCCESSFUL, FOR THE LIMITED PRIVILEGE GROUP IS NO GREATER A RISK THAN THE AVERAGE DRIVER. IF ONE BELIEVES THAT A PERSON CONVICTED OF DUI SHOULD NOT BE ALLOWED ON THE ROAD AT ALL (HYPOTHETICALLY REDUCING THE RISK OF HIS ACCIDENT INVOLVEMENT TO ZERO), THEN THE PROGRAM CAN BE CRITIZED. CERTAINLY THE CONTINUING USE OF LIMITED LICENSING REQUIRES FURTHER EVALUATION, BUT THIS INITIAL STUDY INDICATES THE POTENTIAL USEFULNESS OF THE EVALUATION AND COMPARISON OF A BROAD RANGE OF COUNTERMEASURES.

RECENTLY A BILL SUBMITTED TO THE GENERAL ASSEMBLY OF THE STATE OF COLORADO CALLED FOR DRIVER EDUCATION IN THE PUBLIC HIGH SCHOOLS AND DRIVER IMPROVEMENT COURSES FOR REINSTATEMENT OF LICENSES. IT SPECIFICALLY CALLED FOR THE STATE TO PROVIDE FUNDS FOR "THE SCIENTIFIC EVALUATION OF THE EFFECTIVENESS OF THE MAJOR PROGRAMS OF THIS ARTICLE AT REGULAR INTERVALS NOT TO EXCEED FIVE YEARS." THE EFFECTIVENESS OF A PROGRAM IS DETERMINED BY THE EXTENT TO WHICH THE PROGRAM IS INSTRUMENTAL IN REDUCING TRAFFIC VIOLATIONS AND CRASHES. THAT DETERMINATION - THE DEGREE OF EFFECTIVENESS - IS WHAT WE SHOULD ASK ABOUT EACH SANCTION WE EMPLOY.

YOU MAY ASK, "HOW CAN WE INITIATE EVALUATION PROGRAMS FOR OUR COURTS? WHAT RESOURCES ARE AVAILABLE?" THE DEPARTMENT OF TRANSPORTATION HAS SET ASIDE FUNDS FOR EVALUATION PURPOSES AND CAN ASSIST IN FINANCING SUCH STUDIES. REQUESTS FOR THIS ASSISTANCE CAN BE MADE THROUGH THE GOVERNOR'S REPRESENTATIVE FOR HIGHWAY SAFETY.

THERE ARE MANY POTENTIAL RESOURCES FOR THE ACTUAL DESIGN AND DEVELOPMENT OF EVALUATION PROGRAMS. UNIVERSITY RESEARCH TEAMS HAVE SPECIAL EXPERTISE IN THIS AREA AND COULD OFFER ASSISTANCE IN STATE AND LOCAL EVALUATION PROGRAMS. MANY PRIVATE RESEARCH ORGANIZATIONS HAVE EXTENSIVE EVALUATION EXPERIENCE AND ARE SEEKING OPPORTUNITIES TO APPLY EVALUATION TECHNIQUES TO AREAS OF PUBLIC CONCERN. REGIONAL OR STATEWIDE JUDICIAL COMMITTEES COULD RECOMMEND JOINT EFFORTS WITH APPROPRIATE UNIVERSITY OR PRIVATE ORGANIZATIONS.

ALL OF US ACCEPT THE PREMISE THAT THE ROLE OF A TRAFFIC COURT JUDGE IS CRITICAL TO THE EFFECTIVE SOLUTION OF THE HIGHWAY SAFETY PROBLEM; THAT THE JUDGE IS THE KEY TO THE SOLUTION'S SUCCESS OR FAILURE. THEREFORE IT IS APPARENT THAT YOU MUST USE YOUR RESOURCES IN THOSE AREAS OF MAXIMUM EFFECTIVENESS. ALL OF YOU ARE LEADERS IN YOUR FIELD; ALL OF YOU HAVE SUPERIOR CAPABILITY TO DEVELOP NEW AND INNOVATIVE COUNTERMEASURES. ANY ONE OF THESE MAY HOLD THE KEY TO SUCCESS OF EFFECTIVE HIGHWAY SAFETY ADJUDICATION. YET, BOTH TRADITIONAL COUNTERMEASURES IN COMMON USE AND NEW AND INNOVATIVE COUNTERMEASURES BEING DEVELOPED MUST BE PROVEN EFFECTIVE. EVALUATION OF COUNTERMEASURES SHOULD BE INCLUDED IN YOUR EFFORTS TO REDUCE INJURIES, DEATHS AND DAMAGE ON OUR HIGHWAYS.

## Footnotes

1) Blumenthal, Murray and H. Laurence Ross. Two Experimental Studies of Traffic Law, Volume I: The Effect of Legal Sanctions on DUI Offenders, Final Report, Department of Transportation, National Highway Traffic Safety Administration, February, 1973. At times in the study, the researchers found prior DUI's recorded in the Motor Vehicle Department's records although the sentencing judge was unaware of the prior charge.

2) Ibid., p. xii

3) Ibid., pp 44-5

4) Ibid., p.59. Emphasis added

5) Johns, Thomas R., and Edward A. Mascarello, "An Assessment of the Limited Driving Licenses Amendment to the North Carolina Statutes Relating to Drunk Driving," The University of North Carolina, Highway Safety Research Center, April 1971.

6) Coppin, R. S. and G. Van Oldenbeek, "Driving Under Suspension and Revocation: A Study of Suspended and Revoked Drivers Classified as Negligent Operators," State of California, Department of Motor Vehicles, January 1965.

# Exercise III

## Highway Safety - A Systems Approach

## Purpose and Description

Purpose: This exercise is intended to refocus the discussion and content of the workshop on the judge's role as part of the greater highway safety system. A specific traffic case is used as the catalyst to bring together important elements in the highway system. Participants are asked to draw upon all the information presented thus far in the workshop and are provided with additional information related to particular system elements. The exercise gives participants the opportunity to consider each of these elements in some detail and to formulate plans for their improved efficiency and effectiveness. Finally, participants work together to achieve a system-solution to the hypothetical case. The exercise emphasizes the potential role of the judge as a facilitator of improved cooperation among the separate parts of the highway safety system.

Description: After the introduction to the exercise, participants will meet in their small groups to read and discuss a fictional case history of a traffic accident. Their discussion will attempt to identify the cause or causes of the accident. Trainers will provide participants with brief summaries of research relating to many elements of the highway system. Participants will consider the way in which each of these elements contributed to the case history accident and how each might be changed or improved so that such accidents might be avoided.

Small groups will report the results of their discussions in a general meeting, describing the elements of the highway system which they believe contributed to the accident. The chairman and/or trainers will guide the general discussion to emphasize that each of these elements is a part of the larger highway safety system and that the judge has a potentially central role in increasing cooperation between them. Ways of encouraging such cooperation will be discussed.

## Notes to Trainers

Instructions to Participants: The chairman or a trainer should read the instructions to participants at the beginning of this exercise. Trainers should review these instructions with their small groups.

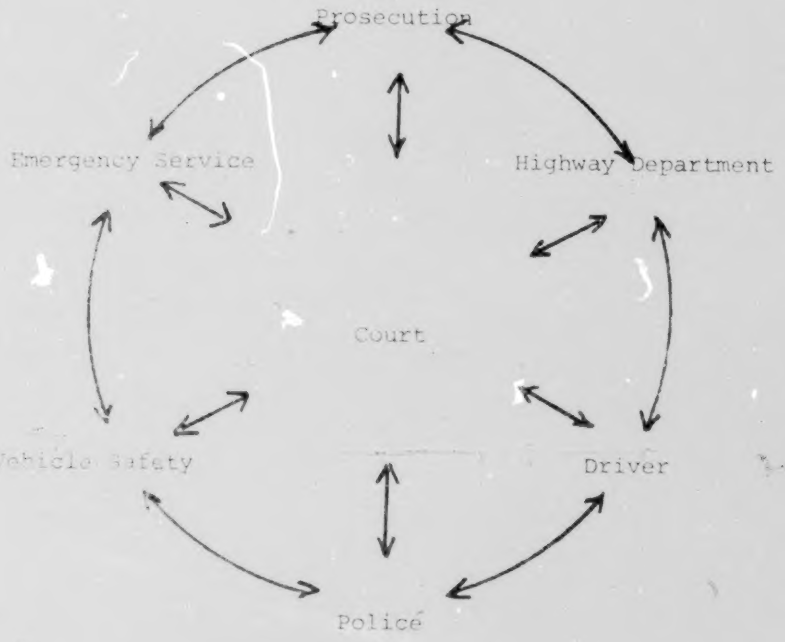
Small Group Tasks: Distribute the case history and ask participants to read it individually. Ask the group to answer the question, "What was the cause of John William's death?". The group will not agree on a single cause and the trainer should support their consideration of multiple causes. Distribute the Research Items. (More complete information on each of these studies appears under "Research Abstracts" at the conclusion of this manual section. These Abstracts are included for your reference, but are too lengthy for participant use at this time.) Ask the group to discuss the way in which each of the major elements of the highway safety system effected the accident. Ask them to suggest ways in which these elements might be improved.

Referring to the list of Key Discussion Topics which follows, ask the group to describe the degree of cooperation and coordination of the various parts of the highway safety system in their own communities. Ask them if there is anything that they, as judges, might do to improve this cooperation.

## KEY DISCUSSION TOPICS

- What was the cause/causes of John William's death?
- Many communities report that there have never been "multi-disciplinary" meetings of law enforcement, highway, emergency medical and judicial officials to formulate an approach to highway safety problems. What is the situation of your community?
- What can you, as a judge, do to prevent situations like the one described in this case history?

General Meeting: Each small group should report the results of their discussion, including the identification of multiple causes of the accident and suggestions for the way in which various elements of the highway system might be modified and improved. As each element is identified and discussed, the chairman or a trainer should note it on a chalkboard or flip chart in a circular pattern. The judicial element should be placed in the center of this system diagram to emphasize the pivotal role of the judge and his ability to interact with other elements of the system, as illustrated below.


Prosecution
Emergency Service
Highway Department
Court
Vehicle Safety
Driver
Police

The general discussion should conclude with this focus on a multidisciplinary approach which could be initiated and coordinated by the judge.

# INSTRUCTIONS TO PARTICIPANTS

THUS FAR IN THIS WORKSHOP WE HAVE FOCUSED ON WHAT YOU, AS TRAFFIC COURT JUDGES, CAN DO WITHIN YOUR COURTROOM TO DEAL WITH THE TRAFFIC VIOLATOR AND THE PROBLEM DRIVER WHO COMES BEFORE YOU. WE ARE ASKING YOU NOW TO CONSIDER OUR HIGHWAY SAFETY PROBLEM IN ITS BROADEST SCOPE. WE HOPE YOU WILL MAKE USE OF THE INFORMATION, CONCLUSIONS AND RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN OUR PREVIOUS DISCUSSIONS AND PRESENTATIONS.

AT THE BEGINNING OF THIS EXERCISE, WE ARE ASKING YOU TO MEET IN SMALL GROUPS TO READ AND DISCUSS A CASE HISTORY OF A "TYPICAL" TRAFFIC ACCIDENT. WE WOULD LIKE YOU TO BEGIN WITH A CONSIDERATION OF THE QUESTION "WHAT WAS THE CAUSE OF JOHN WILLIAM'S DEATH?" WE HOPE YOU WILL DISCUSS NOT ONLY ITS CAUSE, BUT THE WAY IN WHICH IT MIGHT HAVE BEEN PREVENTED. YOUR TRAINERS WILL PROVIDE YOU WITH ADDITIONAL MATERIALS THAT MAY ASSIST YOU IN YOUR DISCUSSION.

WE WOULD LIKE EACH OF THE SMALL GROUPS TO REPORT THE RESULTS OF ITS SESSION IN A GENERAL MEETING HERE. WE HOPE THAT THIS GENERAL MEETING WILL RESULT IN SOME SPECIFIC RECOMMENDATIONS AS TO HOW WE MAY MORE EFFECTIVELY DEAL WITH THE TOTAL HIGHWAY SAFETY PROBLEM.

IF THERE ARE NO QUESTIONS, PLEASE REPORT TO YOUR SMALL GROUPS NOW.

## A Case History

John Williams, age 22, had been employed as a construction worker for two years. He was unmarried and lived with his family in a seven-room frame house. On Friday and Saturday evenings he often met friends in the tavern of a neighboring town 11 miles from his home where he had attended high school. During the course of an evening at the tavern he usually drank enough to raise his blood alcohol to levels defined as illegal in this state.

John was arrested twice on weekend nights after a state patrolman noticed his erratic driving. In both instances, the charges of driving under the influence of alcohol were reduced to a non-alcohol involvement. The first time, the prosecutor offered to reduce the charge and encouraged John to plead guilty. The prosecutor believed that it was necessary, whenever possible, to avoid over-burdening the court's limited resources. In addition, he usually tried to avoid action that would result in mandatory license suspension, recognizing that there was no alternative transportation in the area and people depended on their cars for work, shopping and recreation. John's lawyer persuaded him to plead guilty to the reduced charge offered by the prosecutor.

A trial of the second charge resulted in the judge dismissing the DWI charge after a rather impassioned plea from John's father during the trial. The judge later cautioned John's father privately, urging him to exert more influence over John's behavior.

The highway between John's home and the neighboring town has a long history. It began as a narrow trail, but the first settlers widened it and filled in the low places with crushed rock. In 1926 it was graded and surfaced. Today, over 1,000 vehicles use the road daily. Four people have been killed and thirty injured in crashes on the road in the past three years but no analysis was performed to determine causation. The road is patrolled on an average of four times daily by state and county police within their respective jurisdictions.

John bought his car used, three years ago. The front wheels were out of alignment, resulting in a slight pull to the left. There was less than 1/8 inch of tread on the tires. There was approximately 2 inches of play in the steering wheel. Deterioration of the muffler resulted in a seepage of carbon monoxide into the vehicle. He procured a mandatory inspection sticker from a friend who ignored the defects upon John's promise to correct them.

On Friday, January 5, at 1:22 a.m., John Williams stumbled slightly as he left the tavern and walked to his car. His blood alcohol level was .12. It had just started to snow. Three minutes after he left the parking lot, John's eyes began to close for longer and longer periods of time. Finally, his head slumped down on his chest. The car, moving 60 mph., drifted to the left across the road through the falling snow. The car crossed the shoulder and went through the ditch. John woke up just as the car was stopped by a tree eight feet from the road's edge. On impact with the tree John's body continued its forward movement against the steering wheel and the windshield, then fell back and was caught between the dashboard and the seat.

A few minutes later the crash was reported by a passing motorist to the county police. The dispatcher believed the scene to be in the area within highway patrol jurisdiction. He attempted to reach the patrol by telephone since the radio was unreliable in poor weather. He received a busy signal initially but tried about 10 minutes later and related the occurrence. The patrol arrived on the scene thirty-seven minutes after the motorist's report was received.

An ambulance was summoned and the highway patrol officer rendered first aid. The ambulance service was provided by the local mortuary and the driver had to be awakened. The ambulance arrived one hour and ten minutes later. John Williams was pronounced dead on arrival at the county hospital.

## Research Items

Source:

Abt Associates, Inc., *Alcohol - Highway Traffic Safety for Law Enforcement Officials*, a workshop manual prepared for the National Highway Traffic Safety Administration.

Summary: The workshop, presented to a representative group of police departments, was concerned with the problem drinker-driver as one serious part of the traffic safety problem. The leaders of the workshop recommended several general countermeasures: pre-sentence investigations of convicted drinking drivers; special training for prosecutors in prosecuting DWI violations including discouraging plea bargaining; and supplementation of probation staff with personnel trained in alcohol problems. These suggestions presume cooperation between enforcement, administrative and rehabilitative elements of the highway systems.

Source:

Abt Associates, Inc., *Alcohol - Highway Traffic Safety for Law Enforcement Officials*, a workshop manual prepared for the National Highway Traffic Safety Administration.

Summary: The following recommendations dealing with police action were made: increased police patrols at times and locations of most alcohol related crashes; roadside safety checks; alcohol - traffic safety training for enforcement personnel; expedited court-related activities of policemen handling DWI cases; and use of alcohol detection equipment.

Source:

Automobile Insurance and Compensation Study, *Driver Behavior and Accident Involvement: Implications for Tort Liability*, Department of Transportation, October 1970.

Summary: The study's third chapter, "The Limits of Driver Capability," presents research on the perceptual, conceptual, and motor skills needed by the driver to meet different driving demands in different driving environments.

The authors challenge the assumption that all drivers have it within their capacity to meet the legal standard - moving their vehicles safely from one point to another.

One perceptual factor affecting a driver's ability is the limited capacity of peripheral vision even in the normal driver. The demands of situations such as [illegible], moving on and off freeways, and passing may be beyond man's limited physical and mental abilities to operate a vehicle safely.

Source:

Comptroller General of the United States, "Problems of Implementing the Highway Safety Improvement Program," Report to the Subcommittee on Investigations and Oversight, Committee on Public Works, House of Representatives, May 26, 1972.

Summary: The General Accounting Office (GAO) reported that the Department of Transportation has failed to fully implement a program to identify and correct hazardous highway locations. Among the more easily identifiable and correctable hazards are fixed roadside objects - wall-like bridge abutments, unyielding signposts, rigid light poles, concrete footings, and spearlike guardrails. The GAO recommended that the Federal Highway Administration (FHWA) set aside a specific part of highway trust funds to be used for the elimination or correction of hazardous highway locations, which in turn would promote greater efforts by the states to improve highway safety in a systematic manner.

Source:

Cramton, Roger C., "Driver Behavior and Legal Sanctions: A Study of Deterrence," in O'Day, James (ed.), Driver Behavior - Cause and Effect, Proceedings of the Second Annual Traffic Safety Research Symposium of the Automobile Insurance Institute, Insurance Institute for Highway Safety, Washington, D.C., March 19 - 21, 1968.

Summary: The author reviews the broad field of traffic regulations and suggests that the present system of regulation may have less of a deterrent effect than expected, due to low apprehension and enforcement levels. There is some evidence to the effect that when the perceived risk of apprehension for violations, such as speeding, is low, the deterrent effect of traffic rules is severely limited.

Source:

"Executive Summary of the Final Report of Multidisciplinary Accident Analysis," School of Engineering and Environmental Design, University of Miami, Coral Gables, Florida, April [illegible] (prepared for the National Highway Traffic Safety Administration).

Summary: The study focused its investigation on the roles of the driver, the vehicle, and the environment as they interrelate in the pre-crash, crash and post-crash phases.

The conclusions from this investigation:

1. The primary causative factors in accidents appear to be human [illegible], although vehicular and environmental factors are contributory.
2. The single most involved factor in fatal accidents is the presence and use of alcohol and other drugs.
3. The design and construction of current vehicles is largely a function of public demand.
4. Nonuse of available restraining devices is the single most related factor to increased injury severity.
5. Occupant protection from interior impacts is inadequate even in late model vehicles.
6. Sufficient occupant compartment integrity during the crash phase is still lacking.
7. The smaller the vehicle the more severe the injury to non-ejected occupants.
8. The unrestrained ejected occupant will suffer significantly greater injuries than a non-ejected occupant.

Source:

Haddon, William, Jr., "A Logical Framework for Categorizing Highway Safety Phenomena and Activity," The Journal of Trauma, Vol. 12, No. 3, 1972.

Summary: Dr. Haddon played a key role in developing a chart which classifies [illegible] [illegible] [illegible] time sequences. By dividing a problem into component parts and distributing these factors into phases, the individual elements can be better isolated for critical review and for the development of countermeasures directed at the conditions producing human and property damage.

FACTORS

| | | HUMAN | VEHICLE AND EQUIPMENT | ENVIRONMENT |
|---|---|---|---|---|
| PHASES | PRE CRASH | | | |
| | CRASH | | | |
| | POST CRASH | | | |
| | RESULTS → | | | |

The phases are described as

- Pre Crash - The elements which determine whether a crash will occur.
- Crash - The elements which determine the type and severity of damage caused to people and property.
- Post Crash - The recovery, treatment and repair elements which influence the type and severity of the final human and property losses.

Source:

Insurance Institute for Highway Safety, "State Held Liable for Outdated Highway Design," Status Report, Vol. 7, No. 21, Nov. 13, 1972 (The article is quoted in its entirety.)

Summary: The California Supreme Court has held in Baldwin vs. California, 491 P.2d 112 (1972), that a citizen can sue the state for a crash caused by the highway design which was originally considered safe, but later became dangerous because of "changed physical conditions." Previously, the court had ruled that the state was immune from such claims. Another instance of alleged inadequate highway design has resulted in a suit, filed in the U.S. District Court for the Eastern District of Virginia, against the federal government. The suit alleges that a bridge on a U.S. parkway was constructed with "defective guardrails and supports" and further that when the speed limit on the parkway was increased "no changes to improve the bridge" and guardrails were made. The suit was brought after a car allegedly thrown out of control by a blown-out tire, crashed through the guardrail and plunged into a ravine killing three persons and seriously injuring three others.

Source:

Lindsey, Robert, "Low Cost Road Improvements Found to Aid Safety," The New York Times, week of April 22, 1973.

Summary: Highway design is increasingly being blamed for many of the nation's 55,000 traffic deaths each year. Highway researchers have discovered that motorists can be protected from simple, one-vehicle crashes in which a driver runs off the road and hits a roadside obstruction by placing some sort of cushion, e.g. empty steel drums, in front of such obstructions.

Source:

McGuire, Frederick C., "The Understanding and Prediction of Accident-Producing Behavior," in North Carolina Symposium on Highway Safety, Volume I, Highway Safety: Anatomy of a Problem, Fall, 1969.

Summary: The author found age and sex to be the most important correlates of accident frequency — younger males are most likely to be involved in accidents. The accident-producer is also seen as coming mostly from an upper socio-economic family background and presenting a personality picture of being more adventurous, ambitious, and less tied to social conventions.

Source:

Peat, Marwick, Mitchell & Co., "Procedural and Administrative Analysis of Virginia Traffic Courts," prepared for the Highway Safety Division, Commonwealth of Virginia October 1970.

Summary: The report attempted to evaluate the impact of the courts on highway safety. The numerous recommendations included suggestions to develop an efficient method for providing driver record information to law enforcement agencies and courts and to provide up-to-date statistical information on current cases before the court so that the judge may allocate his resources more effectively.

Source:

"Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services," report by the National Academy of Sciences' Committee on Medical Services for the Health Services and Mental Health Administration, Rockville, Maryland.

Summary: Accidental injury and acute illness generate a staggering demand on ambulance and rescue services, allied health personnel, physicians, and hospitals for the delivery of emergency medical services. Accidental injury is the leading cause of death among all persons aged 1 to 38. Emergency medical service is one of the weakest links in the delivery of health care in the nation. Thousands of lives are lost through lack of systematic application of established principles of emergency care.

Source:

Stonex, K.A., "Law, Traffic and Engineering Technology," Highway Research Board Special Report 86: A Colloquy on Motor Vehicle and Traffic Law, National Academy of Sciences - National Research Council, 1965.

Summary: The managers of the roadway system at the General Motors Proving Ground found that their test drivers were leaving the road about once every 240,000 miles for a variety of reasons, most involving some driver error. The extent of injury depended on whether the driver ran off into a level field or collided with a tree or other roadside obstacle. The solution to preventing high risks of damage was to remove all such targets.

Source:

Tarrants, William E., "Myths and Misconceptions in Traffic Safety," American Society of Safety Engineers Journal, June 1968.

Summary: Dr. Tarrants discusses the "myths and misconceptions" which serve as the basis for most prevention efforts in highway safety. One of these myths is the "primary cause" in which the contemporary accident investigator is required to discover a single cause for an accident. This limits the questions he asks and information he gathers and ignores the fact that accidents have multiple factors.

## Research Abstracts

### Source:

Abt Associates, Inc., *Alcohol - Highway Traffic Safety for Law Enforcement Officials*, a workshop manual prepared for the National Highway Traffic Safety Administration.

### Discussion:

The workshop was presented to a representative group of state enforcement officials (police departments). It was concerned with the problem drinker-driver as one serious part of the traffic safety problem. The following is an abstract of countermeasures suggested specifically for use by the courts.

1) Conduct pre-sentence investigations of convicted drinking drivers. To accomplish this, the judge must coordinate his efforts with the Department of Motor Vehicles and the appropriate alcoholism rehabilitation-treatment centers. Given the necessary data, the judge can hope to select the disposition most likely to deter the problem drinker from driving again while intoxicated.

2) Provide special training for prosecutor in the prosecution of DWI violations.

3) Encourage prosecutors to proceed on DWI complaints rather than allowing them to be plea bargained to a different charge.

4) Supplement probation staff with personnel especially trained in alcohol problems.

### Conclusions:

The leaders of the workshop realize their recommendations must be tempered by consideration of the economic, the political and the legal realities. Moreover, the suggestions are presumed to be implemented by the courts in a context of cooperation between the various other elements of the highway system - enforcement, administrative and rehabilitative.

Source:

Abt Associates, Inc., Alcohol - Highway Traffic Safety for Law Enforcement Officials, a workshop manual prepared for the National Highway Traffic Safety Administration.

Discussion:

The workshop was presented to a representative group of state enforcement officials (police departments). It was concerned with the problem drinker-driver as one serious part of the traffic safety problem. The following is an abstract of countermeasures suggested specifically for use by law enforcement officials.

1) Police can determine the locations, times of day, and days of week of most alcohol related crashes. Police can then increase patrols during those times and at those locations.

2) Establish a system of roadside safety checks.

   Although arrests may not be permitted during roadside checks. they can serve as a means for educating the public. Additionally, the check serves to monitor those drivers who have had their licenses suspended or revoked.

3) Train enforcement personnel in methods of detecting, apprehending, and handling intoxicated drivers.

   The International Association of Chiefs of Police, under contract to the Department of Transportation, has developed an alcohol-traffic safety curriculum for use by police instructors.

4) Expedite the policeman's court-related activities once he has arrested and charged a driver with DWI.

   a) reduce the time necessary to arraign a driver charged with DWI so that the officer is not kept away from his other duties for an excessive period.
   b) reduce the processing time of the arresting officer.
   c) encourage prosecutors not to plea bargain.
   d) instruct police in how to best present their evidence in court.

Abt Associates cont.

5) Acquire the equipment needed to detect intoxication and then train policemen to use it effectively.

6) Educate the public about the problem of the drinker-driver; for example, through a "ride-along" program where citizens join police patrols.

Conclusions:

The leaders of the workshop realize their recommendations must be tempered by consideration of the economic, the political and the legal realities. Moreover, the suggestions are presumed to be implemented within a highway system in which all elements cooperate. Yet each activity can be initiated without waiting for another agency to act.

### Source:

Automobile Insurance and Compensation Study, Driver Behavior and Accident Involvement: Implications for Tort Liability, Department of Transportation, October 1970.

### Discussion:

The study's third chapter, "The Limits of Driver Capability," presents research on the perceptual, conceptual, and motor skills needed by the driver to meet different driving demands on different driving environments.

The authors challenge the assumption that all drivers have it within their capacity to meet the legal standard - moving their vehicles safely from one point to another.

The perceptual element of the driver tasks - the ability to perceive any potential danger in an appropriate amount of time - is obviously essential. Visual defects therefore can be linked to car crashes. But the normal driver's visual capacity may also represent a danger. For example, the driver's peripheral vision is rather wide, but its limits force the driver to divert his attention from the road to read signs. In addition, the average driver will respond to distractions, thereby lessening the time he is concentrating on the road ahead. One study by T.W. Forbes suggests "drivers are effectively blind or partially blind to areas out of the field of clear vision...that is, beyond the 20-degree cone of clearest vision." The potential danger represented by the limited capacity of peripheral vision should be clear.

### Conclusion:

The discussion above suggests only one perceptual factor that effects a driver's ability to move his car safely. The study discusses additional factors, including the problems of the individual driver in heavy traffic, moving on and off freeways, and passing. The demands of such situations may go beyond man's limited physical abilities (visual acuity and motor coordination) and his limited mental abilities (decision-making skills) to operate a vehicle safely.

Behavior cont.

The authors include a quotation from Ralph Nader's Unsafe At Any Speed:

> The limitations of human beings in coping with the increasingly complex driving task even under the most rigid law enforcement or the most ambitious education program, make it unrealistic to expect all drivers to control their vehicles perfectly all the time.

### Source:

Comptroller General of the United States, "Problems in Implementing the Highway Safety Improvement Program", Report to the Subcommittee on Investigations and Oversight, Committee on Public Works, House of Representatives, May 26, 1972.

### Discussion:

At the request of the House of Representatives, the General Accounting Office (GAO) investigated whether the Department of Transportation has taken all feasible action to implement a program to identify and correct hazardous highway locations. Among the more easily identifiable and correctable hazards are fixed roadside objects - wall-like bridge abutments, unyielding signposts, rigid light posts, concrete footings, and spearlike guardrails.

The effectiveness of removing hazards from specified locations is suggested by a Federal Highway Administration (FHWA) study which compared accident data one year before and one year after safety projects were completed at 446 hazardous locations. At the specified places, (1) fatalities had been reduced 25 percent, (2) personal injuries had been reduced 24 percent, and (3) total accidents had been reduced 20 percent.

### Conclusions and Recommendations:

The investigation found that the program, originated in 1964, to deal with the problem of highway hazards had not been fully implemented. The following is quoted from the GAO report conclusions:

> Data developed by FHWA and various independent highway safety-related organizations demonstrate that a major effort to eliminate highway hazards could contribute materially to the Department's announced intention to make the Nation's highways as safe as possible. We believe that an opportunity exists to improve materially the Nation's traffic safety record if the Department will provide stronger leadership toward the implementation of the highway safety improvement program for Federal-aid highways.

Comptroller cont.

We believe that setting aside a specific part of highway trust funds to be used annually for the elimination or correction of hazardous highway locations would promote greater efforts by the States to improve highway safety and would give the correction of hazardous highway locations the status of a major national program in line with the growing congressional, departmental, and public concern over the large number of fatalities, injuries, and accidents that occur annually on our highways.

The degree of success of an effective highway safety improvement program is dependent on the States' developing comprehensive inventories of correctable highway hazards systematically updated through accident analysis and routinely used for developing and carrying out projects to correct the hazards in accordance with assigned priorities that would provide the greatest benefits for each dollar spent. FHWA's program guidelines, if effectively implemented, could provide reasonable assurance that funds are being used in a systematic manner for highway safety improvement.

Source:

Cramton, Roger C., "Driver Behavior and Legal Sanctions: A Study of Deterrence," in O'Day, James (ed.), Driver Behavior - Cause and Effect, Proceedings of the Second Annual Traffic Safety Research Symposium of the Automobile Insurance Institute, Insurance Institute for Highway Safety, Washington, D.C., March 19-21, 1968.

Discussion:

The author reviews the broad field of traffic regulations. Control is seen as appropriate and necessary to save lives and property. The author considers what form of control should be used to account for the countervailing values of freedom in the use of one's vehicle, efficiency in transportation, minimization of coercion and preservation of individual dignity.

The article suggest [illegible] the present system of traffic regulation may have less of a deterrent effect than expected, due to the low apprehension and enforcement levels.

One informed study found that the chance of apprehension for a violation such as speeding is generally very low. The chance of a driver receiving a citation if traveling more than 10 mph above the speed limit on a particular stretch of highway in Michigan was only 1 in 7600. Thus there is an element of chance in every traffic arrest. Assuming the public can make a reasonable estimation of the chance of apprehension, the perceived risk is so low that the deterrent effect of many traffic rules is severely limited.

There is some evidence that increased levels of enforcement reduce the total number of moving violations for offenses such as speeding. In one experiment on U.S. 101, north of San Diego, California, the state patrol was doubled on the road in 1964. Although traffic increased during the period of observation by 8%, accidents declined 12% and serious accidents declined by more than 20%. A beneficial side effect of intensified patrolling was the availability of police to respond to accidents.

Cramton cont.

Conclusions:

The role of strict enforcement is only one part of an effective program of legal sanctions. There is need for further research in the evaluation of measures for controlling driver behavior.

One area for study is the effect of enforcement levels on accidents, violations and driver behavior.

Source:

"Executive Summary of the Final Report of Multidisciplinary Accident Analysis," School of Engineering and Environmental Design, University of Miami, Coral Gables, Florida, April 1972 (prepared for the National Highway Traffic Safety Administration).

Discussion:

The study focused its investigation on the roles of the driver, the vehicle, and the environment as they interrelate in the pre-crash, crash, and post-crash phases. The researchers drew their conclusions from 40 extensive case studies.

Conclusions: (quoted in full below)

1) Accident Causation: The primary causative factors in both serious and fender-bender accidents appear to be predominantly human in nature (irresponsibility, inability, and inattention). Vehicular and environmental factors together probably do not exceed or meet human causative factors in magnitude of occurrence. However, vehicular and environmental factors are found to be contributory to accident causation and significantly related to injury causation.

2) Alcohol/Drugs: The single most involved factor in the cause of fatal vehicular crash incidents is the presence and use of alcohol or other drugs.

3) Vehicle Design: The design and construction of current vehicles is predominantly a function of social acceptance of, and demand for, inferior merchandise (e.g. a demonstrated demand for "french pastry" vehicle exteriors while ignoring crashworthiness).

4) Injury Severity/Nonuse of Restraint System: The single most related factor to increased injury severity is the nonuse of available restraint systems by vehicle occupants.

5) Occupant Protection (EA Materials/Devices): The lack of adequate occupant protection for interior impacts is still being demonstrated in collisions of late model vehicles, even with the current protection measures (EA material, devices) being required by the federal government.

Executive cont.

6) Occupant Compartment Integrity: Preliminary attempts (e.g. side guard door beam) at reducing intrusion into the vehicle occupant compartment have been helpful in mitigating injuries, but are not yet adequate (e.g. side guard door beam and support failures) in maintaining sufficient compartment integrity during the crash phase.

7) "Small" Cars: The "smaller" (weight and volume) the accident involved vehicle the more severe will be the injury to nonejected occupants.

8) "Ejection: The unrestrained occupant who is ejected will, with exceptionally high probability, suffer significantly greater injuries than a non-ejected occupant.

9) Environmental: Continued lack of full compliance with HSPS 12 (Highway Design Maintenance and Construction) will result in continued high accident/injury rates due to environmental hazards. Compliance with this standard will allow for reduction of such experiences. Specifically, disregard with certain Standard 12 sections is demonstrated in current and proposed new construction.

Recommendations:

Numberous specific recommendations, numbering over 100, were made regarding the driver, the vehicle, and the environment as factors in accidents.

The full report is available from the National Technical Information Service (NTIS), Springfield, Va. 22152.

Source:

Haddon, William, Jr., "A Logical Framework for Categorizing Highway Safety Phenomena and Activity," The Journal of Trauma, Vol. 12, No. 3, 1972.

Discussion:

As the first director of the National Highway Safety Bureau and now as president of the Insurance Institute for Highway Safety, Dr. Haddon has played a key role in the creation of a chart for the "logical classification and analysis of road-loss factors and loss reduction options." By dividing a problem into its component factors - human, vehicle and equipment, environment - and viewing the interactions of those parts over a time continuum, the conditions which produce losses can be better identified and countermeasures developed which are specifically aimed at those conditions.

The chart follows:

FACTORS

PHASES

| | HUMAN | VEHICLE AND EQUIPMENT | ENVIRONMENT |
|---|---|---|---|
| PRE CRASH | | | |
| CRASH | | | |
| POST CRASH | | | |
| RESULTS--> | | | |

The phases are described as

- Pre Crash - In this phase are the elements which determine whether a crash will occur.
- Crash - As the crash occurs, elements in this phase determine the type and severity of damage caused to people and property.

Haddon cont.

Post Crash - Once the crash has occurred, the recovery, treatment and repair elements in this phase influence the type and severity of the final losses in people and property.

Conclusion:

By reorganizing one's thoughts in terms of the proposed chart, it is hoped that countermeasures can be found to reduce losses. At the least, the system may encourage the problem-solver to view parts of the problem he has not considered previously.

Source:

Insurance Institute for Highway Safety, "State Held Liable for Outdated High-Way Design," Status Report, Vol. 7, No. 21, Nov. 13, 1972 (The article is quoted in its entirety.)

Discussion:

The California Supreme Court has held in Baldwin vs. California, 491 P.2d 112 (1972), that a citizen can sue the state for a crash caused by the highway design which was originally considered safe, but later became dangerous because of "changed physical conditions." Previously, the court had ruled that the state was immune from such claims.

Ronald Harrison, an attorney for California's Department of Public Works, says that as a result of the decision "all public entities" can expect "a more than ordinary increase in exposure" to personal injury than other types of law suits.

The court's decision came in a suit over faulty intersection design. The crash victim, Jesse Baldwin, had stopped his truck in the northbound passing land of a four lane highway in order to make a lett hand turn at the intersection. The intersection did not have a separate left hand turn lane. His truck was struck from the rear and pushed into oncoming traffic where it was struck head on by another vehicle.

Baldwin's attorney claimed that because of an increase in the volume of traffic on the highway and a history of crashes at the intersection, the state should have corrected the hazard. Baldwin presented evidence to show that over a six year period the state Division of Highways had been repeatedly notified of the hazardous intersection.

The state argued that under the California Government Tort Claims Act it could not be held liable for Baldwin's injuries. The statute provides that an agency is not liable for injuries resulting from a plan or design if the agency acted reasonably in approving that plan or design. The state's attorneys presented evidence to show that when the plans for the intersection were approved and the intersection was constructed in 1972, it met "accepted highway engineering practices."

Liability cont.

In deciding that the state was liable for the injuries, the California Supreme Court said that when the legislature passed the tort claims act, it did not intend to give the state unlimited, perpetual immunity. When the state knows or should have known that "changed physical conditions" have produced a "dangerous condition," it must act to correct it, the court said. The immunity statute does not allow state agencies "to shut their eyes to the operation of a plan or design once it has been transferred from blueprint to blacktop," according to the court.

The court rejected arguments from the state that extending state liability will "bankrupt public entities." The court remarked that "no fiscal disaster" has occurred in Illinois or New York - states which already follow the concept of liability for changed conditions. The court said that in many instances "inexpensive remedies, such as warning signs, lights, barricades or guardrails will be sufficient."

FEDERAL GOVERNMENT ALSO SUED

Another instance of alleged inadequate highway design has resulted in a suit, filed in the U.S. District Court for the Eastern District of Virginia, of $1.8 million against the federal government. The suit alleges that a bridge on a U.S. parkway near Washington, D.C., was constructed with "defective guardrails and supports" which did not restrain a vehicle striking them. In addition, the suit charges that when the parkway's speed limit was increased, "no changes to improve" the bridge and guardrails were made. The suit was brought as a result of a December, 1970, crash in which a station wagon, allegedly thrown out of control by a blown tire, crashed through the bridge guardrail and plunged 97 feet into a ravine. Three persons died and three other occupants were seriously injured in the crash.

Source:

Lindsey, Robert, "Low Cost Road Improvements Found to Aid Safety," The New York Times, week of April 22, 1973.

This article is quoted extensively below:

Discussion:

A 28-year-old pipefitter crashed his 1970 Ford pick-up truck at 70 miles an hour into a row of steel barrels in front of a four-foot thick concrete freeway pier here recently. But he wasn't hurt: The impact of the crash was cushioned by the 42 barrels lined up like a row of closely packed bowling pins.

The incident demonstrated how a relatively inexpensive innovation in highway safety has begun to save significant numbers of lives across the country. It also illustrated why highway design is increasingly being blamed for many of the nation's 55,000 traffic deaths each year.

Among safety experts now a movement is growing to implicate what they call faulty "highway crash design" as a major factor in the death toll and to demand changes. At the same time, courts have begun to hold road designers more responsible than in the past for the safety of their products, much as they began several years ago to hold auto manufacturers more responsible for their products.

In Kansas recently, a $600,000 judgment was awarded against the State Highway Commission to a 20-year-old youth who was paralyzed when a car in which he was riding struck a freeway bridge pier. The court ruled that the pier should have been better marked and protected by a guardrail.

Also, strong evidence is now beginning to accumulate that on highways, as in cars, relatively small steps - such as the use of the $3,500 barrel installations here can have a dramatic effect in converting what would normally be fatal accidents into minor mishaps.

The stakes for making such improvements seem to be high: According to a Government study, at least 20,000 Americans die each year in the simplest kind of accident: A driver runs off the road and hits a roadside abutment, pier, sign, tree, utility pole or other structure. Two-thirds of all fatal accidents on

Lindsey cont.

Federal interstate highways involve only one vehicle.

Federal accident studies indicate that some of the most treacherous points on interstate highways are at off-ramps and intersections - known technically as "gore areas." On the average, there are one or two accidents a year at every such point across the nation.

Because most people travel relatively fast on these superhighways, such crashes tend to be serious. Typically, engineers say, drivers changing from one channel of a freeway system to another become confused or do not react fast enough and plow into abutments or piers at the wedge-shaped intersections.

Highway researchers, led to a large extent by the Texas Transportation Institute at Texas A.&M. University near here, concluded in the late nineteen-sixties that motorists could be protected from these disturbingly frequent crashes by some sort of a "cushion."

The concept that evolved was placing in front of the "gore areas" rows of empty steel drums that would collapse in a controlled way and absorb the kinetic energy of a collision that would normally have to be absorbed by the car and its passengers. The goal was to enable persons wearing seat belts in a standard-sized car to survive a 60-mile-an-hour crash without serious injuries.

Because of a bad history of expressway accidents, and its proximity to the university, Houston late in 1968 became the first major city to use the devices extensively and has had the most experience with them.

"Of all the things you can do for safety, I don't know of any, dollar for dollar, that gives you as much results," W.V. Ward, the Houston Region's chief expressway engineer, said. A recent Federal study seems to confirm effectiveness of the cushioning techniques.

John G. Viner, a Federal Highway Administration researcher, said he had analyzed 68 accidents here and elsewhere where police reports indicated persons normally would have been killed or hospitalized. In these 68 instances in which vehicles hit the crash-cushions, there were only five deaths and 12 hospitalizing injuries, a reduction of 75 per cent.

Lindsey cont.

The devices are now in use, at least on a small scale, in at least 36 states, including New York, One Government official estimated that there were probably 500 in place now across the country, with about half having been installed over the last six to twelve months. The Federal Department of Transportation has ordered states by this summer to list all points on their legs of the interstate system where the devices could be used, and has said it plans to order installation at each of these locations.

### Source:

McGuire, Frederick C., "The Understanding and Prediction of Accident-Producing Behavior," in North Carolina Symposium on Highway Safety, Volume I, *Highway Safety: Anatomy of a Problem*, Fall, 1969.

### Discussion:

The author examines the variables which may be significant in predicting the accident record of a driver.

His study found age and sex to be the most important correlates of accident frequency - younger males are most likely to be involved in accidents. Moreover, the safer driver displayed personality characteristics which could also be seen to correlate highly with sex and age. The safer driver is seen to have interests which are intellectually oriented and more esthetic. He is less aggressive, less demanding of authority positions, and tends to deny open feelings of hostility. His family history and his current family relationships reflect a lesser degree of disruption.

### Conclusions:

The accident-producer is seen as being

> younger, coming mostly from an upper socio-economic family background and presenting a personality picture of being more adventurous, ambitious and less tied to social convention.

But these characteristics, it must be remembered, exist only on the average - describing the group as a whole.

Source:

Peat, Marwick, Mitchell & CO., "Procedural and Administrative Analysis of Virginia Traffic Courts," prepared for the Highway Safety Division, Commonwealth of Virginia, October 1970.

Discussion:

The researchers studied the traffic court operations in the Commonwealth of Virginia. The report attempted to evaluate the impact of the courts on highway safety. The investigation included interviews with judges, law enforcement officials, Department of Motor Vehicles personnel, and the prosecutor's office.

Numerous recommendations were made after an analysis of the data gathered in the interviews. A selected group of suggestions will be outlined below.

1) Develop an efficient method for providing driver record information to the law enforcement agencies and courts.

When one realizes there were approximately 437,000 convictions in Virginia for moving traffic violations, the size of the problem became apparent. For proper sentencing, the court needs access to the defendant's previous record. The use of remote terminal systems tied to a central computer file is one possibility.

2) Provide up-to-date statistical information.

If the judge is to decide where to invest court resources - in terms of his time and efforts, he needs an accurate assessment of the cases before him - the number of charges, who is being charged, the nature of the charges. In this manner, he can arrange his daily docket for maximum effectiveness. He might group cases by type. He might schedule all minor offenses for one day so that these cases can be dealt with expeditiously.

Sources:

"Roles and Resources of Federal Agencies in Support of Comprehensive Emergency Medical Services," report by the National Academy of Sciences' Committee on Medical Services for the Health Services and Mental Health Administration, Rockville, Maryland.

Discussion:

The following is an excerpt.

Accidental injury and acute illness generate a staggering demand on ambulance and rescue services, allied health personnel, physicians, and hospitals for the delivery of emergency medical services. Accidental injury is the leading cause of death among all persons aged 1 to 38. Each year more than 52 million U.S. citizens are injured, of whom more than 110,000 die, 11 million require bed care for a day or more, and 400,000 suffer lasting disability at a cost of nearly $3 billion in medical fees and hopsital expenses and over $7 billion in lost wages. Those requiring hospitalization occupy an average of 65,000 beds for 22 million bed-days under the care of 88,000 hospital personnel. This hospital load is equivalent to 130 500-bed hospitals. Of the more than 700,000 deaths from heart disease each year, the majority are due to acute myocardial infarction and more than one half of these deaths occur before reaching a hospital. Approximately 40 million persons seek care each year in hospital emergency departments as a result of accidents, heart disease, stroke, poisoning, diabetic coma, convulsive disorders, and many other illnesses.

Emergency medical service is one of the weakest links in the delivery of health care in the nation. Thousands of lives are lost through lack of systematic application of established principles of emergency care. Few at the site of accidental injury or sudden illness are trained in the fundamentals of restoration of breathing, control of hemorrhage, or splinting of fractures. The majority of ambulances in the United States are of the hearse, limousine, or station wagon type which are inadequate in space and equipment and are manned by individuals with inadequate training to provide essential life support. Pilot studies with better ambulance services indicate that thousands of lives can be saved and disability reduced.

Roles cont.

Many ambulances lack radio communication even with their own dispatchers. Communications rarely exist between ambulances and hospitals, so that most patients arrive at emergency departments without prior notification. Most emergency departments of the nation are not only lacking in facilities and personnel, but are overtaxed by millions of non-emergency cases for whom ancillary outpatient facilities should be provided, especially during evening hours and on weekends. In comparison with facilities for definitive care of illness, few centers of excellence for the care of the critically ill or injured exist.

Source:

Stonex, K.A., "Law, Traffic and Engineering Technology," Highway Research Board Special Report 86: A Colloquy on Motor Vehicle and Traffic Law, National Academy of Sciences - National Research Council, 1965.

Discussion:

The author, an automobile safety engineer at the General Motors Technical Center, reports that human "failures" while driving are predictable.

He believes that a realistic approach to this problem is the design of cars and highway systems to avoid the high-energy impacts of automobiles involved in accidents.

The management of the roadway system at the General Motors Proving Ground found that their test drivers were leaving the road about once every 240,000 miles. The extent of injury was left to chance depending on whether the driver ran off into a level field or collided with a tree.

The solution to preventing high risks of damage was to remove all targets - by the elimination of roadside obstacles, flattening the slopes, and rounding the ditch bottoms.

The drivers continue to leave the road about once every 240,000 miles for a variety of reasons, most involving some driver error. The now "nearly ideal system" at the General Motors Proving Ground has shown no personal injury off-the-road accident for the last 80,676,724 miles.

Source:

Tarrants, William E., "Myths and Misconceptions in Traffic Safety, "American Society of Safety Engineers Journal, June 1968.

Discussion:

The article by Dr. Tarrants discusses the "nature of the concepts and methods - the myths and misconceptions - which serve commonly as the basis for most prevention efforts (in highway safety)."

One of these myths is called "The Primary Cause" and deals with the lack of data on particular causes of accidents. "For example, there is growing evidence that mechanical failures contribute frequently to accidents. Most of these are obscure and never documented, assumed by many not to occur. One reason for this lack of complete causal information is the rather limited problem-perception capability of the typical contemporary investigator. Most traffic-accident reports used for prevention purposes are prepared by law-enforcement officials who are concerned primarily with documenting evidence for legal purposes. The investigator most often concentrates on identifying law violations instead of injury causal factors."

Moreover, most accident report forms stress the discovery of a "primary cause." The investigator feels compelled to find one cause for the report which limits the questions he asks and the information he gathers. Asking what is "the primary cause" ignores the fact that accidents have multiple causes.

# CONCLUDING SPEECH

IN THE PAST TWO DAYS, WE HAVE ALL PARTICIPATED IN QUITE A DIFFERENT TYPE OF TRAFFIC COURT CONFERENCE. DIFFERENT IN THAT WE HAVE NOT DISCUSSED THE TRADITIONAL TOPICS COVERED IN MOST SUCH CONFERENCES.

THE NEED FOR ADEQUATE COURTROOM FACILITIES IS BY NOW OBVIOUS. THE SAME MAY BE SAID CONCERNING PROPER ADMINISTRATION, THE USE OF MANAGEMENT TECHNIQUES, THE ADVANTAGE OF RAPID RETRIEVAL OF RECORDS, AND MANY OTHER SUBJECTS.

ALL OF THESE ARE NECESSARY AND WE WOULD NOT DISCREDIT ANY INDIVIDUALS OR ORGANIZATIONS WHICH HAVE DONE MUCH TO IMPROVE TRAFFIC COURT ADMINISTRATION. A WEALTH OF RESOURCES AND RESOURCE MATERIAL EXISTS TO MEET WHATEVER YOUR NEEDS IN THESE AREAS MAY BE.

THE EMPHASIS OF THIS CONFERENCE, HOWEVER, HAS BEEN DIRECTED TOWARD THE EFFECTIVENESS OF TRAFFIC COURTS IN DEALING WITH THE HIGHWAY SAFETY PROBLEM. THE MOST WELL-ORGANIZED AND PROPERLY STAFFED COURT WITH NEW, EFFICIENT QUARTERS AND FACILITIES MAY BE AT THE LOW END OF THE SCALE IN EFFECTIVENESS - NOT PURPOSEFULLY, BUT THROUGH A LACK OF INFORMATION, A LACK OF EVALUATION CAPACITY AND VERY PROBABABLY A LACK OF TIME.

WE HAVE PRESENTED AND DISCUSSED THE RESULTS OF THE LATEST RESEARCH IN TRAFFIC ADJUDICATION. TOGETHER, WE HAVE SEEN THAT IT IS THE AVERAGE DRIVER WHO IS MOST LIKELY TO BE INVOLVED IN A CRASH - WHEN-

EVER HIS CAPABILITITES CANNOT MEET THE DEMANDS OF ROAD AND VEHICLE DESIGN AND CONDITION. RESEARCH HAS DEMONSTRATED THAT THERE IS GENERALLY A VERY LOW CORRELATION BETWEEN PAST VIOLATIONS AND FUTURE CRASH INVOLVEMENT. IT HAS ALSO SHOWN THAT THE EXCEPTIONS ARE THE PROBLEM DRINKER DRIVER, THE YOUNG DRIVER AND THE ELDERLY DRIVER. CURRENT EVALUATIONS HAVE CAST SERIOUS DOUBT UPON THE EFFECTIVENESS OF ANY OF THE TRADITIONAL SANCTIONS. EVEN THE MOST EFFICIENTLY ADMINISTERED COURTS MUST DEAL WITH THIS INFORMATION IF THEY ARE TO INCREASE THEIR IMPACT UPON HIGHWAY SAFETY.

OUR PURPOSE IN THIS CONFERENCE, OR WORKSHOP - FOR WE ARE WORKING TOGETHER - HAS BEEN TO PRESENT A POSITIVE CHALLENGE FOR THE FUTURE. THE CHALLENGE IS DIRECTED TO YOU AS A JUDGE AND AS A REPRESENTATIVE OF THE HIGHWAY SAFETY SYSTEM. IF YOU HAVE BEGUN TO QUESTION THE VALUE OF CONCEPTS SUCH AS THE MANDATORY COURT APPEARANCE FOR EACH AND EVERY VIOLATOR, YOU CAN NOW BEGIN TO REDESIGN YOUR THINKING AND YOUR EFFORTS TOWARD GREATER EFFECTIVENESS. YOU CAN DEVOTE SUFFICIENT TIME TO THOSE CASES WHICH REQUIRE YOUR ATTENTION: THE YOUNG, THE ELDERLY AND THE PROBLEM DRINKER. YOU CAN DEVELOP INNOVATIVE PROCEDURES AND TECHNIQUES IN SEARCH OF COUNTERMEASURES WHICH WILL PROVE EFFECTIVE IN REDUCING HIGHWAY ACCIDENTS.

IN THIS REGARD, THE WORKSHOP HAS DEMONSTRATED THE NEED FOR THE EVALUATION OF PROGRAMS OF COUNTERMEASURES AND SANCTIONS. RESEARCH SHOWS THAT MANY OF OUR TRADITIONAL IDEAS DO NOT WITHSTAND THE TEST OF OBJECTIVE EVALUATION. WE HAVE TOO MUCH A STAKE TO REPEAT THIS ERROR.

FINALLY, WE HAVE VIEWED TRAFFIC SAFETY IN A NEW PERSPECTIVE. FROM THIS NEW PERSPECTIVE WE SEE THE JUDGE IN HIS ACTUAL ROLE AS THE CRITICAL COMPONENT OF A SYSTEM MUCH LARGER THAN THE COURT ITSELF AND INVOLVING ENFORCEMENT, ENGINEERING, LICENSING AND EDUCATION.

FEW PEOPLE HAVE THE OPPORTUNITY OF THE TRAFFIC COURT JUDGE - TO CONTRIBUTE TO THE SOLUTION OF ONE OF OUR NATION'S MOST SERIOUS PROBLEMS - TO CONTRIBUTE TO THE SAVING OF LIVES AND THE PREVENTION OF HUMAN SUFFERING. THE CHALLENGE IS YOURS.

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